HTC-VX500

SERVICE MANUAL

E Model

- This set is the deck and Video CD section in MHC-VX500/VX700AV.

This stereo system is equipped with the Dolby B-type noise reduction system.
* Manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Mechanism	HTC-V5550
	CD Mechanism Type	CDM38-5BD24
	Base Unit Type	BU-5BD24
	Optical Pick-up Name	KSS-213BA/F-NP
Tape deck Section	Model Name Using Similar Mechanism	HTC-V5550
	Tape Transport Mechanism Type	TCM-230AWR2 TCM-230PWR2

SPECIFICATIONS

Video section

Inputs
AV INPUT VIDEO (phono jack):
1Vp-p, 75 Ω
VIDEO IN (phono jack)
1Vp-p, 75 Ω

Outputs
MONITOR OUT (phono jack):
1Vp-p, 75 Ω
VIDEO OUT (phono jack)
1Vp-p, 75 Ω
S-VIDEO (4-pin/mini-DIN jack):
Y: 1Vp-p, unbalanced, sync negative
C: 0.286Vp-p, load impedance 75 Ω

VIDEO CD/CD player section

System: Compact disc, digital audio and video system

Laser: Semiconductor laser (λ=780nm)
Emission duradon: continuous

Laser output: Max. 44.6μW*
*This output is the value measured at a diatance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Frequency response: 20 Hz – 20 kHz (±1 dB)

Wavelength: 780 – 790 nm

Signal to noise ratio: More than 90 dB

Dynamic range: More than 90 dB

Video Color System format
NTSC, PAL

CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)
Wavelength: 600 nm
Output Level: –18 dBm

Tape player section

Recording system: 4-track 2-channel stereo

Frequency response (DOLBY NR OFF):
40 – 13,000 Hz (±3 dB), using Sony TYPE Ⅰ cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE Ⅱ cassette

General

Dimensions (w/h/d): Approx. 288 × 205 × 360 mm

Mass: Approx. 4.6 kg

Design and specifications are subject to change without notice.

COMPACT DISC DECK

MICROFILM

SONY®

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveform is output three times.

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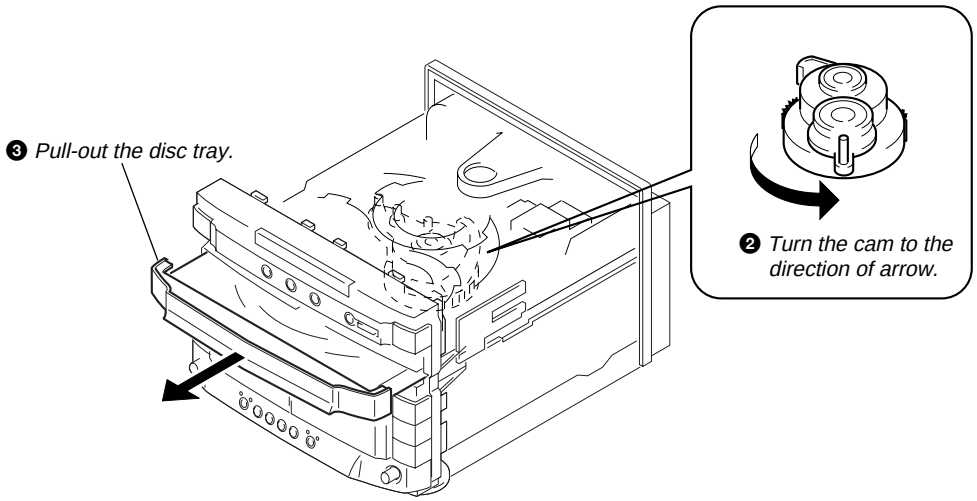
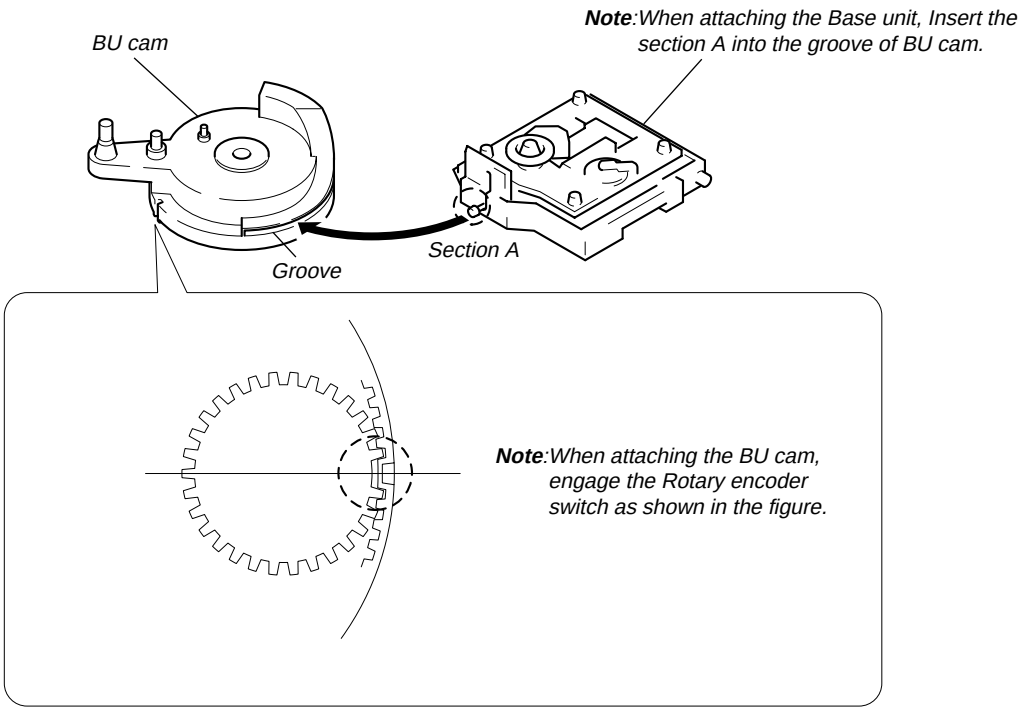
SECTION 1
SERVICING NOTE

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

❶ *Remove the Case.*



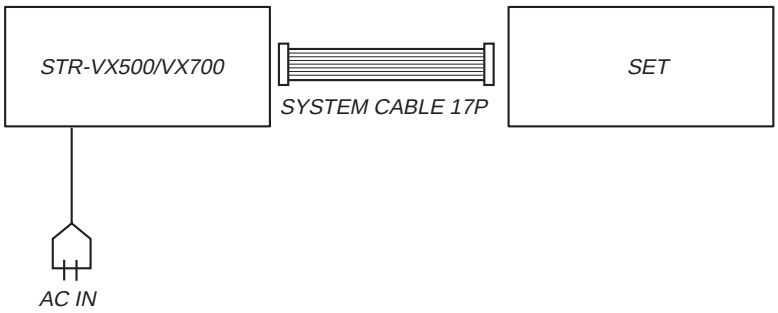
Note for Installation (ROTARY ENCODER)


BU cam
Note:When attaching the Base unit, Insert the section A into the groove of BU cam.
Groove
Section A
Note:When attaching the BU cam, engage the Rotary encoder switch as shown in the figure.

Connection and Operations of the Unit by Itself

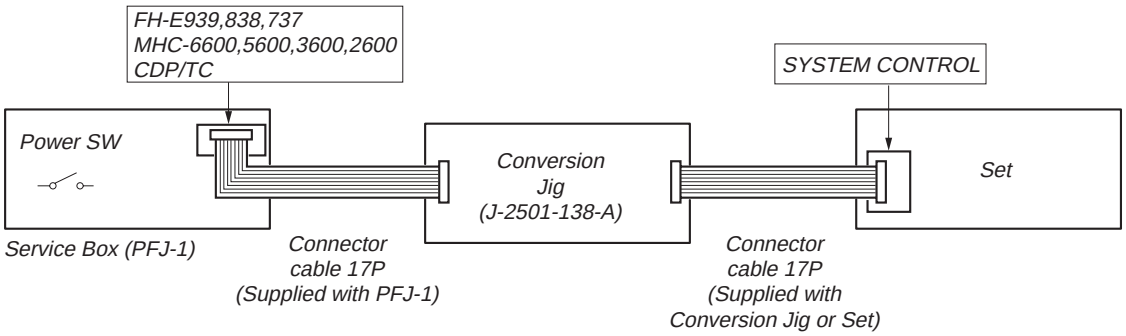
This unit cannot be operated by itself as it does not come with a power supply.
Connect STR-VX500/VX700 as shown in "Connection 1" before beginning servicing.

Connection 1: If there is STR-VX500/VX700.



Use a power supply jig (PFJ-1) if the STR-VX500/VX700 is not available.
Connect the conversion jig for connection (J-2501-138-A) as shown in "Connection 2" before beginning servicing.

Connection 2: If there is not STR-VX500/VX700.



To operate the unit by itself, turn on the power of the conduction jig (PFJ-1), and press the ☐ (TAPE A), ☐ (TAPE B), and ▷ (TAPE B) buttons together in this order.

As this unit is not equipped with fast forward and rewind buttons, buttons need to be combined and pressed together for different functions when operating the unit by itself. (See Table-2.)
However, it will not operate properly if operations are performed without switching the functions.
Perform the following procedure to switch the functions before operating the unit.
The function selected is indicated by the DISC NUMBER indicator.

Table 1 Switching the Functions

Function	Operation	Indicator
CD	■ (CD) button + HI-SPEED DUBBING button	①○②○③
TAPE A	■ (CD) button + ● REC button	①○② ③
TAPE B	■ (CD) button + ◁ (TAPE A) button	① ②○③

Table 2 Pressing Combination of Buttons When Operated by Itself

Deck	Function	Operation
CD	▶▶I (AMS)	☐ (TAPE B) button + DISC3 button
	I◀◀ (AMS)	☐ (TAPE B) button + DISC1 button
	▶▶	☐ (TAPE A) button + DISC3 button
	◀◀	☐ (TAPE A) button + DISC1 button
TAPE A	▶▶I (AMS)	DISC SKIP button + ▷ (TAPE B)
TAPE B	I◀◀ (AMS)	DISC SKIP button + ◁ (TAPE B)
	▶▶	DISC SKIP button + ▷ (TAPE A)
	◀◀	DISC SKIP button + ◁ (TAPE A)

The function can be differentiated by the lighting of this part of the indicator.

↓ ↓
①○②○③

Cold Reset

NOTE: This is the mode for operating the unit by itself. Take note that the operating method differs when connected to the STR-VX500/VX700. This method is described in the manuals of the STR-VX500 and STR-VX700. Refer to these manuals for details.

This mode is used for initializing the RAM contents. Perform this mode when returning the repaired product to the customer.

Procedure:

1. After turning ON the power of the conduction jig (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.
2. Press the ❚❚ (TAPE) button while pressing the ■ (CD) button.

CD Delivery Mode

NOTE: This is the mode for operating the unit by itself. Take note that the operating method differs when connected to the STR-VX500/VX700. This method is described in the manuals of the STR-VX500 and STR-VX700. Refer to these manuals for details.
This mode moves the pickup to areas where the anti-vibration is stronger. Perform this mode when returning the repaired product to the customer.

Procedure:

1. After turning ON the power of the conduction jig (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.
2. Press the CD SYNCHRO button while pressing the ■ (CD) button.
3. Wait untill ● (TAPE B) indicator is on befor disconnect from the conduction jig (PFJ-1).

LED All Lit Mode

NOTE: Always perform this mode when operating the unit by itself.
This mode is used for lighting up the whole LED.

Procedure:

1. After turning ON the power of the conduction jig (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.
2. The whole LED can be turned on and off each time the ☐ (TAPE A) button is pressed while pressing the ■ (CD) button.
3. Press the three buttons in step 1 at the end.

Key Check Mode

NOTE: Always perform this mode when operating the unit by itself.
This mode is used for checking the key inputs of the buttons of the unit.

Procedure:

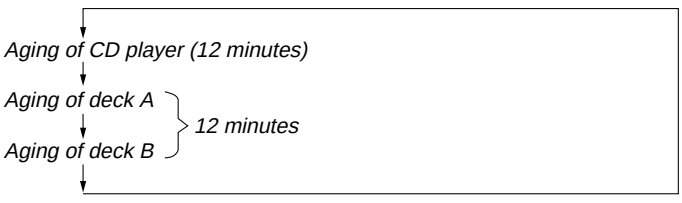
1. After turning ON the power of the conduction jig (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.
2. Press the DOLBY NR button while pressing the ■ (CD) button to set the key check mode, and the indicator displays "③ ▷❚❚".
3. The number of buttons pressed are indicated in binary digits by the indicator LED. Buttons pressed once are not counted when pressed again.
4. Press the two buttons in step 2 at the end.

Display: ①◯②◯③
MSB ↑ ↑ LSB

Aging Mode

NOTE: Perform the following procedure only when operating the unit by itself.
This mode is used for checking the operations of the CD player and tape deck.
The operations are the same as the aging mode described in the service manual for the STR-VX500/VX700. However as this unit does not have a fluorescent indicator tube, operating states and error statuses cannot be checked.
If the STR-VX500/VX700 is available, set the aging mode according to those service manuals.

Aging continues in the following sequence as long as no errors occur.

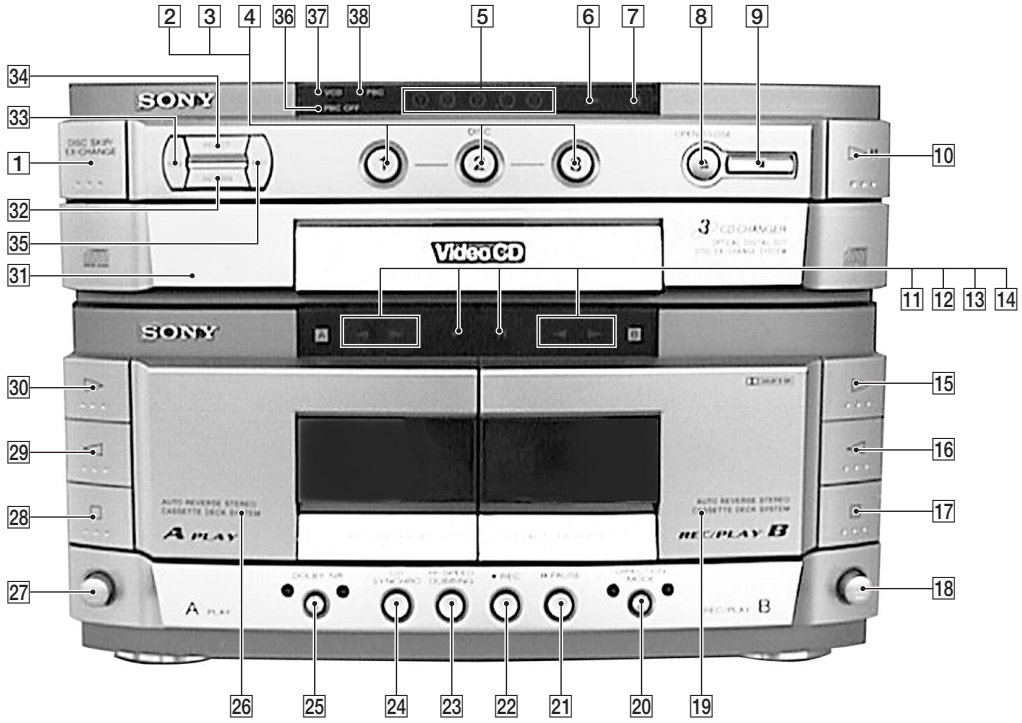


Procedure:

1. After turning ON the power of the conduction jig (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.
2. Press the ☐ (TAPE B) button while pressing the ■ (CD) button to set the aging mode and start aging.
3. To end aging, press the three buttons in step 1.

SECTION 2
GENERAL

Front Panel



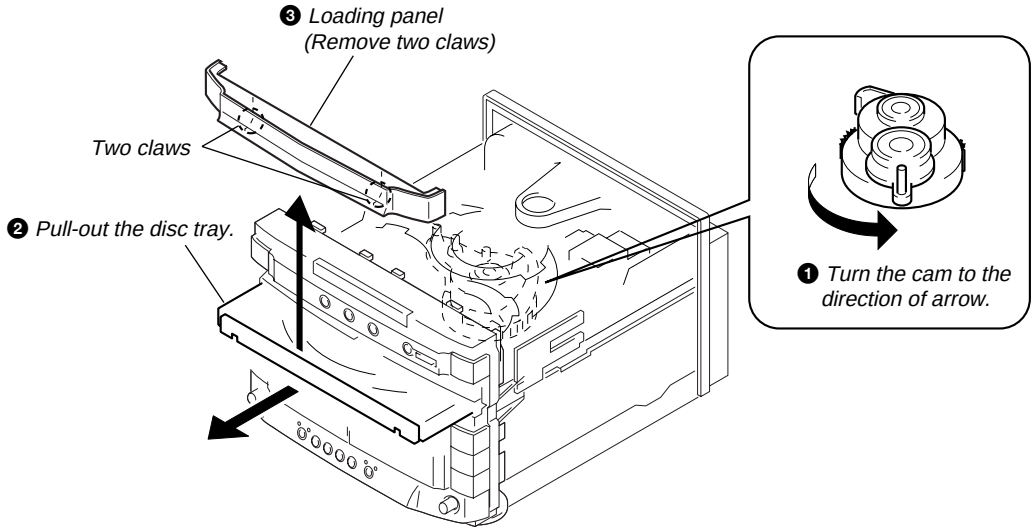
Location of Parts and Controls

1 DISC SKIP/EX-CHANGE button
2 DISC 1 button
3 DISC 2 button
4 DISC 3 button
5 DISC NUMBER ①◯②◯③ indicator
6 ► (CD play) indicator
7 ❚❚ (CD pause) indicator
8 ⏏ OPEN/CLOSE button
9 ■ (CD stop) button
10 ▷❚❚ (CD play pause) button
11 ◄► (Deck A play) indicator
12 ● (Deck B rec) indicator
13 ❚❚ (Tape (Deck B pause)) indicator
14 ◄► (Deck B play) indicator
15 ▷ (Deck B play) button
16 ◁ (Deck B play) button
17 □ (Deck B stop) button
18 ⏏ (Deck B eject) button
19 Casette lid (Deck B)
20 DIRECTION MODE button
21 ❚❚ PAUSE button
22 ● REC button
23 HI-SPEED DUBBING button
24 CD SYNCHRO button
25 DOLBY NR button
26 Casette lid (Deck A)
27 ⏏ EJECT (Deck A) button
28 □ (Deck A stop) button
29 ◁ (Deck A play) button
30 ▷ (Deck A play) button
31 Video CD Disc tray
32 RETURN button
33 PREV button
34 SELECT button
35 NEXT button
36 PBC OFF indicator
37 VCD indicator
38 PBC indicator

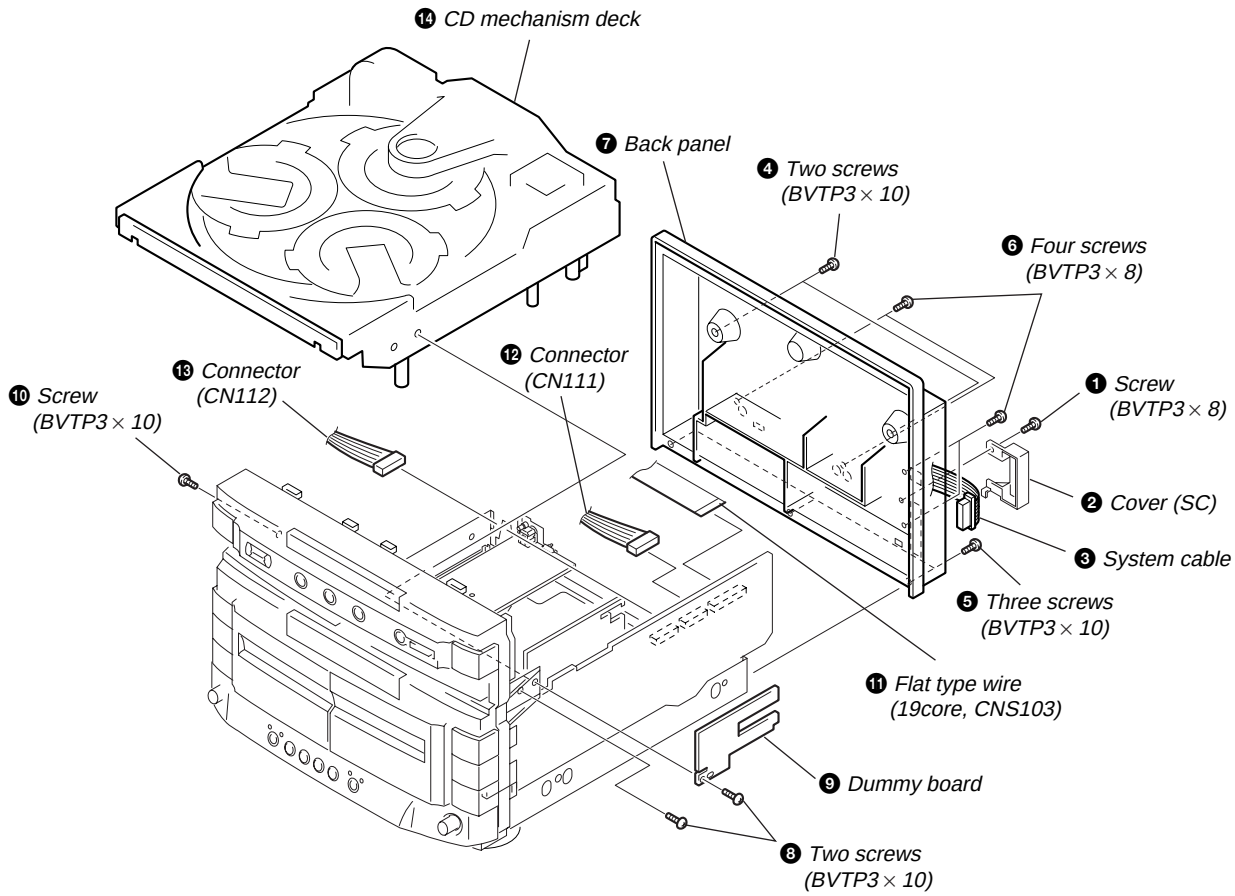
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

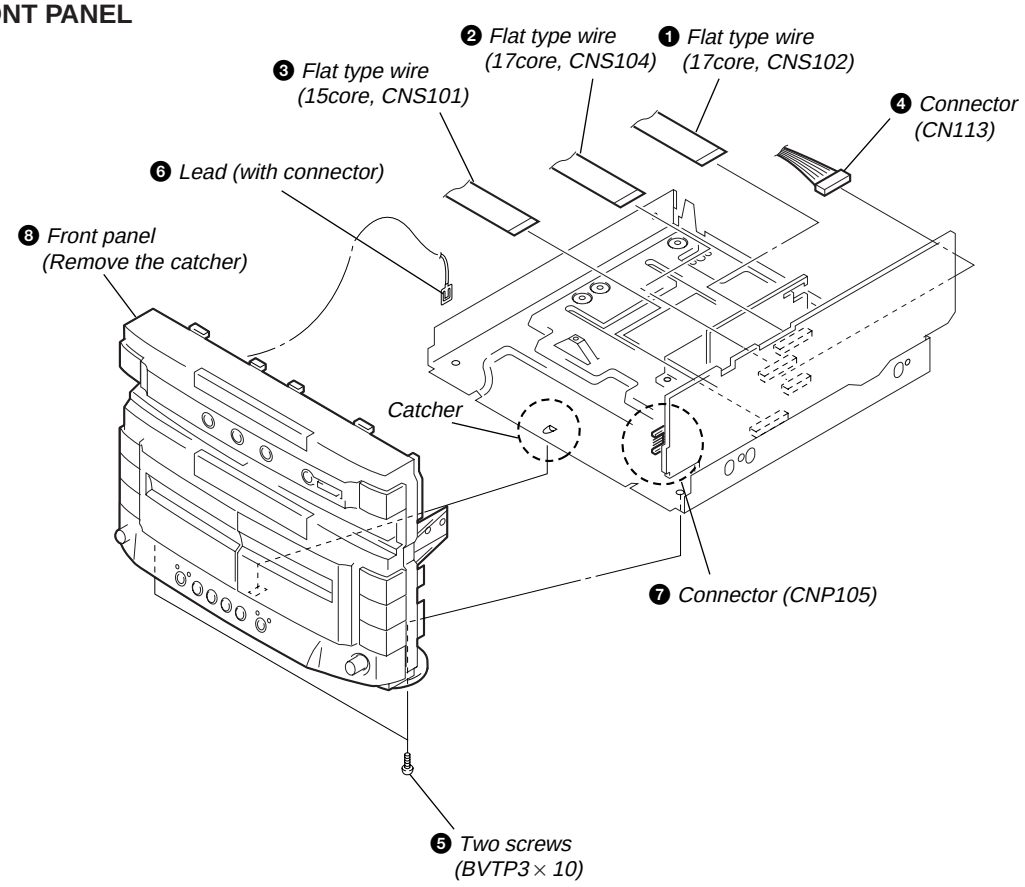
3-1. LOADING PANEL



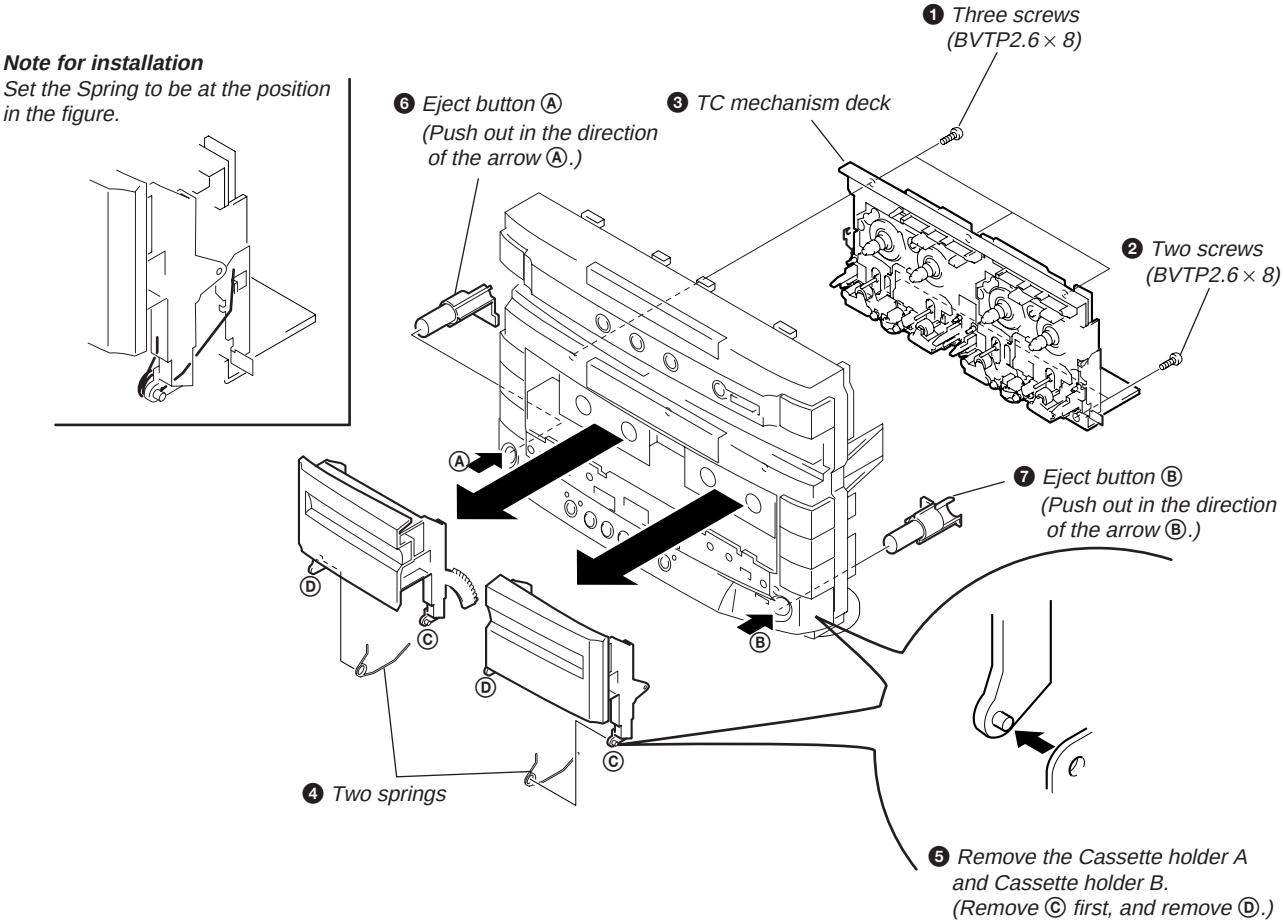
3-2. BACK PANEL AND CD MECHANISM DECK



3-3. FRONT PANEL

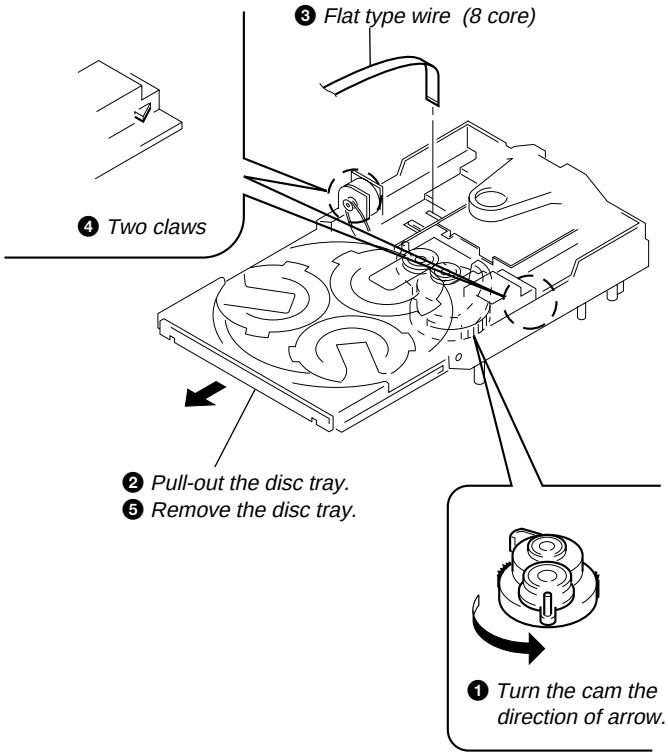


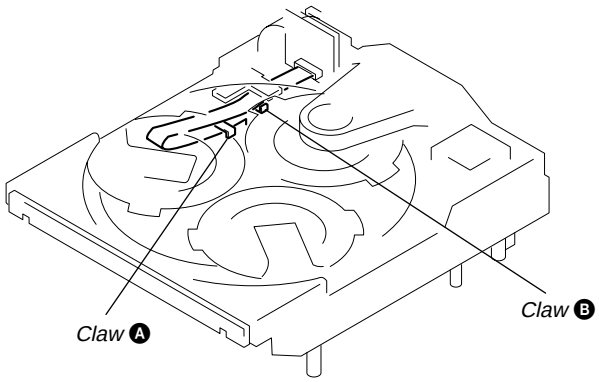
3-4. TC MECHANISM DECK AND CASSETTE HOLDER


Note for installation
Set the Spring to be at the position in the figure.
❶ Three screws
(BVTP2.6 × 8)
❻ Eject button Ⓐ
(Push out in the direction of the arrow Ⓐ.)
❸ TC mechanism deck
❷ Two screws
(BVTP2.6 × 8)
❼ Eject button Ⓑ
(Push out in the direction of the arrow Ⓑ.)
❹ Two springs
❺ Remove the Cassette holder A and Cassette holder B.
(Remove Ⓒ first, and remove Ⓓ.)

3-5. DISC TRAY

Note: *When installing the Disc tray, pull around the flat type wire to pass through the claw Ⓐ and claw Ⓑ , as shown in the figure.*





SECTION 4
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads — pinch rollers
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 5
ELECTRICAL ADJUSTMENTS

Read before adjustments

To adjust the unit, operate the unit by itself using the conduction jig (PFJ-1).

For details on switching functions and fast forwarding the unit, etc. when operating it by itself, refer to “Connection and Operations of the Unit by Itself” on page 5 of Servicing Notes.

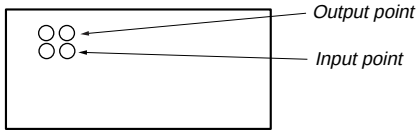
• Turning on the power

When operating the unit by itself:

1. After turning ON the power of the conduction tool (PFJ-1), press the ☐ (TAPE A) button, ☐ (TAPE B) button, and ▷ (TAPE B) button together in this order.

Inputting/outputting audio signals:

Use the jack of the power supply jig (PFJ-1).



PFJ-1

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

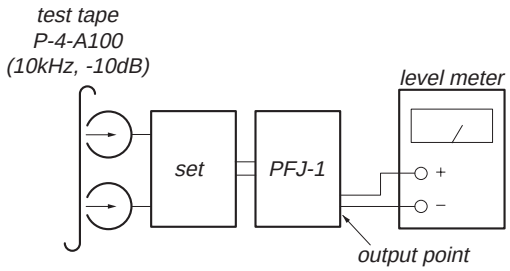
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

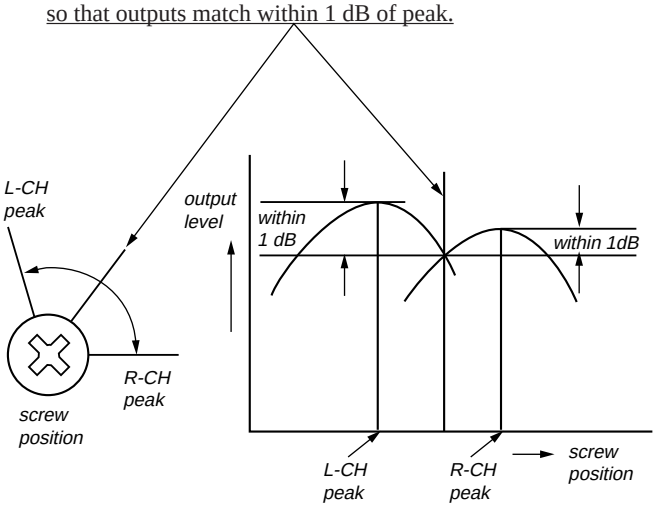
Note: Perform this adjustments for both decks.

Procedure:

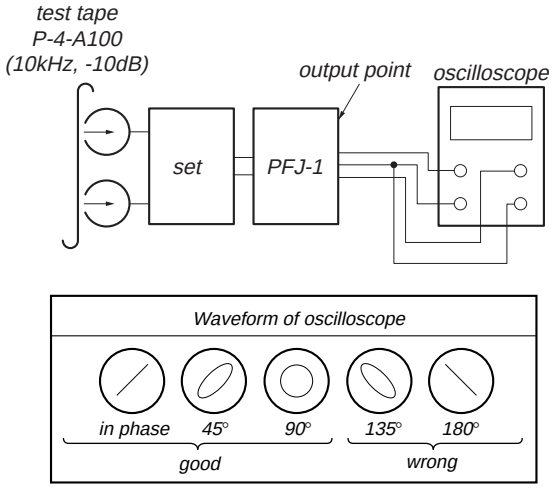
1. Mode : Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.

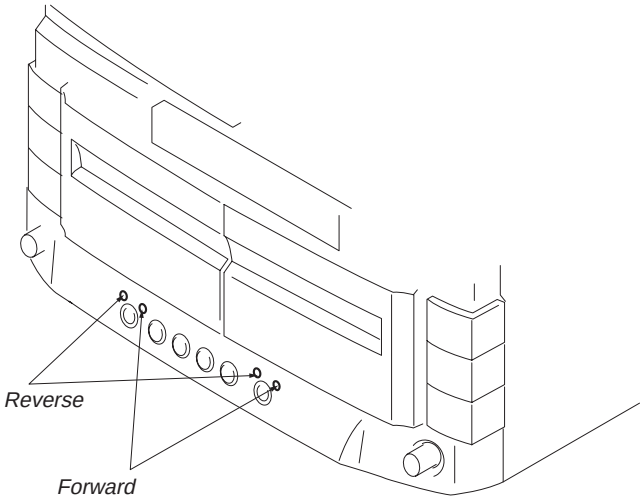


3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A)
Record/Playback/Erase Head (Deck B)



Tape Speed Adjustment (Deck B)

Note: Set the test mode using the following method and begin tape speed adjustment.
In the test mode, the speed will switch to double speed or normal speed each time the HI-DUB button is pressed.

Procedure:
Press the ■ (CD) button while pressing the DIRECTION MODE button.

1. Insert the WS-48B into deck B, while pressing the ■ (CD) button, press the ◁ (TAPE A) button, set the function to "deck B".
2. Press the ▷ button of deck B.
3. Press the HI-DUB button and play the tape at double speed.
4. Adjust RV1001 of the LEAF SW board so that the reading of the frequency counter becomes 6000 ± 180 Hz.
5. Press the HI-DUB button and play the tape at normal speed.
6. Adjust RV1002 of the LEAF SW board so that the reading of the frequency counter becomes 3000 ± 90 Hz.

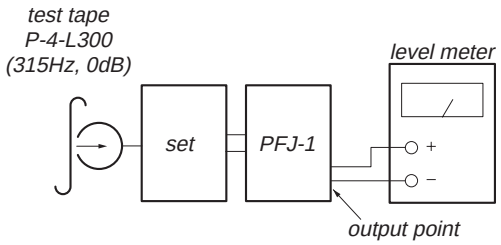
Adjustment Location: LEAF SW board

Sample Value of Wow and flutter

W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

Playback Level Adjustment (Deck A, Deck B)

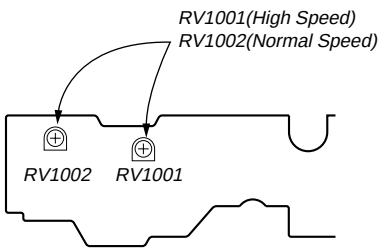
Procedure:
Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH)
so that adjustment within the following adjustment level.

Adjustment level:
Output point from PFJ-1 playback level: 301.5 to 338.3 mV (–8.2 to –7.2 dB)
level difference between the channels: within ± 0.5 dB
Adjustment Location: AUDIO board

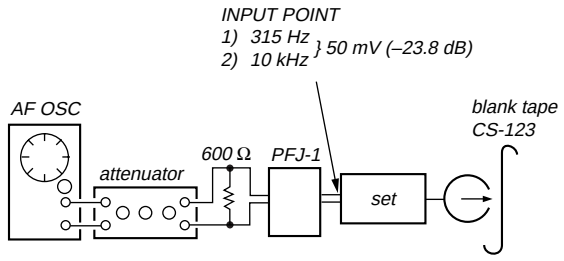
Adjustment Location [LEAF SW BOARD]



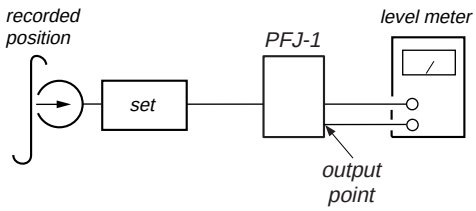
Record Bias Adjustment (Deck B)

Procedure:

1. Press the ■ (CD) button while pressing the DIRECTION MODE button.
2. While pressing the ■ (CD) button, press the ◁ (TAPE A) button, set the function to “deck B”.
3. Insert a tape into deck B, press the ● REC button, and then press the ► button to start recording.
4. Mode: Record



5. Mode: Playback



6. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 3 and 4.

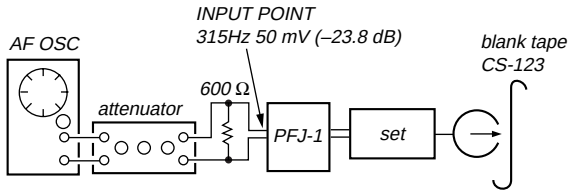
Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be ± 1.0 dB.

Adjustment Location: AUDIO board

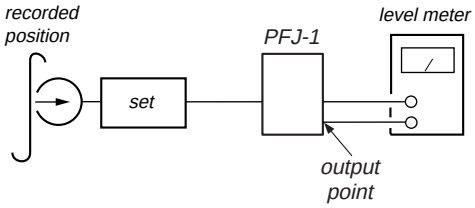
Record Level Adjustment (Deck B)

Procedure:

1. Press the ■ (CD) button while pressing the DIRECTION MODE button.
2. While pressing the ■ (CD) button, press the ◁ (TAPE A) button, set the function to “deck B”.
3. Insert a tape into deck B, press the ● REC button, and then press the ► button to start recording.
4. Mode: Record



5. Mode: Playback



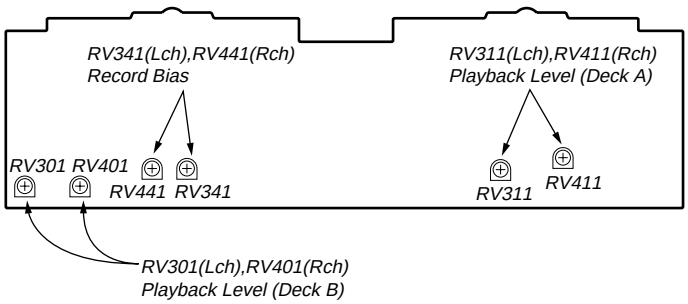
6. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 3 and 4.

Adjustment level:
Output point from PFJ-1 playback level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

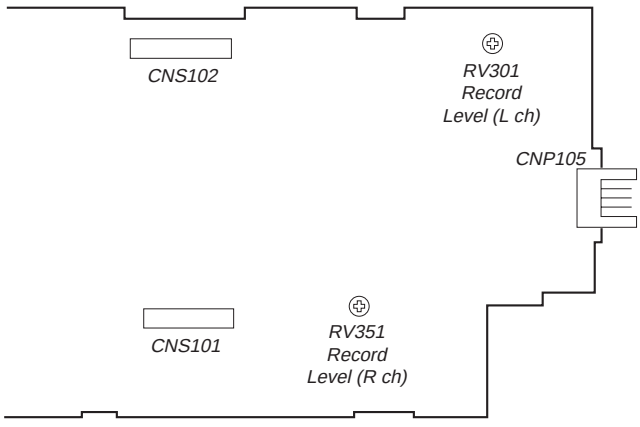
Adjustment Location: MAIN board

Adjustment Location

[AUDIO BOARD] (Conductor Side)



[MAIN BOARD] (Component Side)



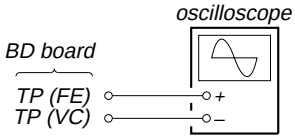
CD SECTION

Notes:

1. CD block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (Part No.: 3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

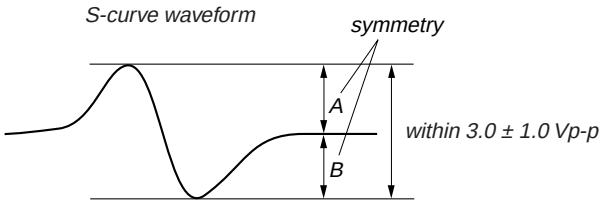
S-Curve Check

Connection:



Procedure:

1. Connect the oscilloscope to TP (FE) and TP (VC) on BD board.
2. Connect between test point TP (FOK) and Ground by lead wire.
3. Turned power switch on.
4. Put disc (YEDS-18) in and turned power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3.0 ± 1.0 Vp-p.

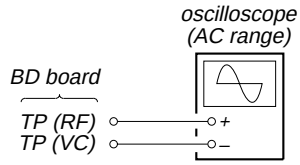


6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

Connection:

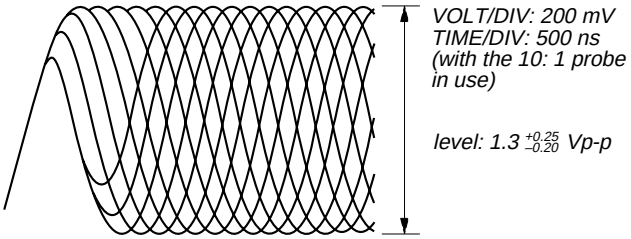


Procedure:

1. Connect the oscilloscope to TP (RF) and TP (VC) on BD board.
2. Turned power switch on.
3. Put disc (YEDS-18) in and press the ▷II button.
4. Confirm that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

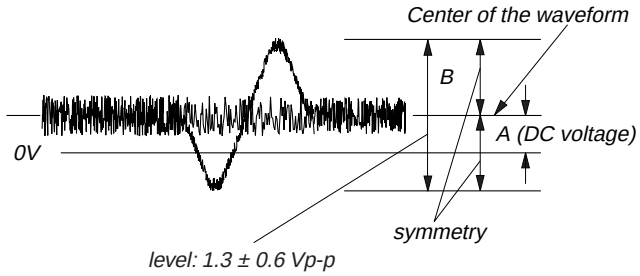
When a general remote commander is not used (1 Track Jump Check):

Procedure:

1. Connect the oscilloscope to TP (TE) and TP (VC) on BD board.
2. Turned power switch on.
3. Put disc (YEDS-18) in and press the ▷II button, and play the number five track.
4. Press the ▷II button. (Becomes the 1 track jump mode)
5. Confirm that the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the traverse waveform. Confirm the following:

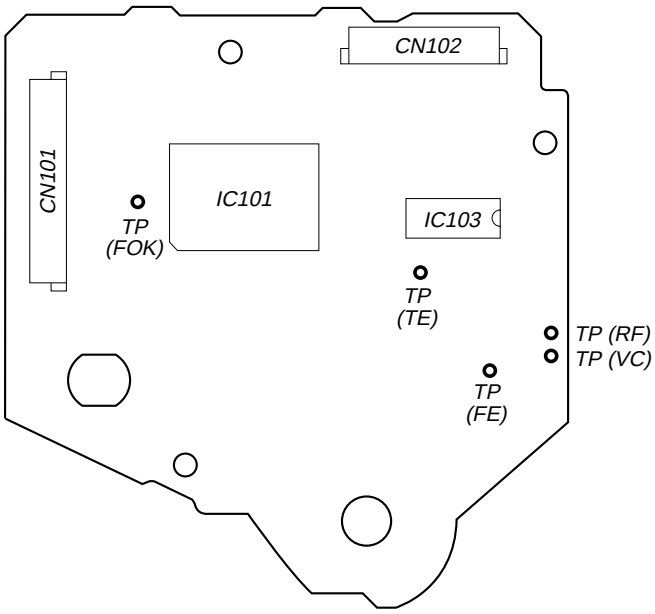
$$\frac{A - B}{2\,(A + B)} \times 100 = \pm 7\ (\%)$$

1 track jump waveform



Connection Location:

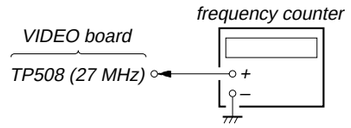
[BD Board] (Side A)



VIDEO SECTION

Frequency Adjustment

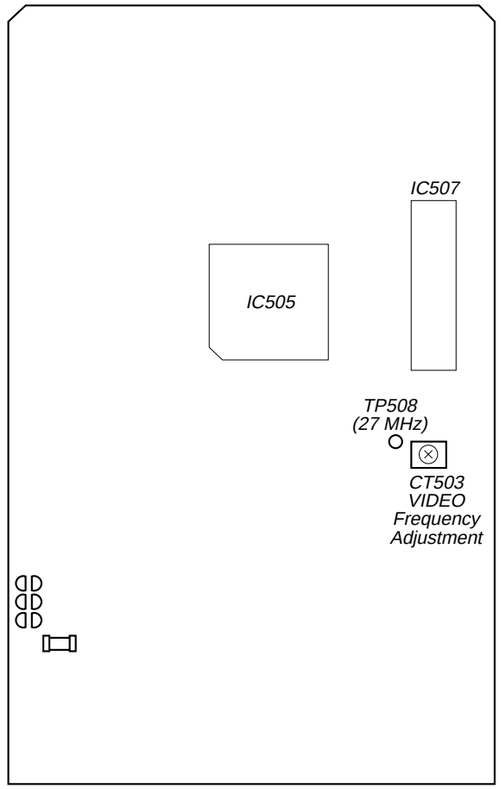
Connection:



Procedure:

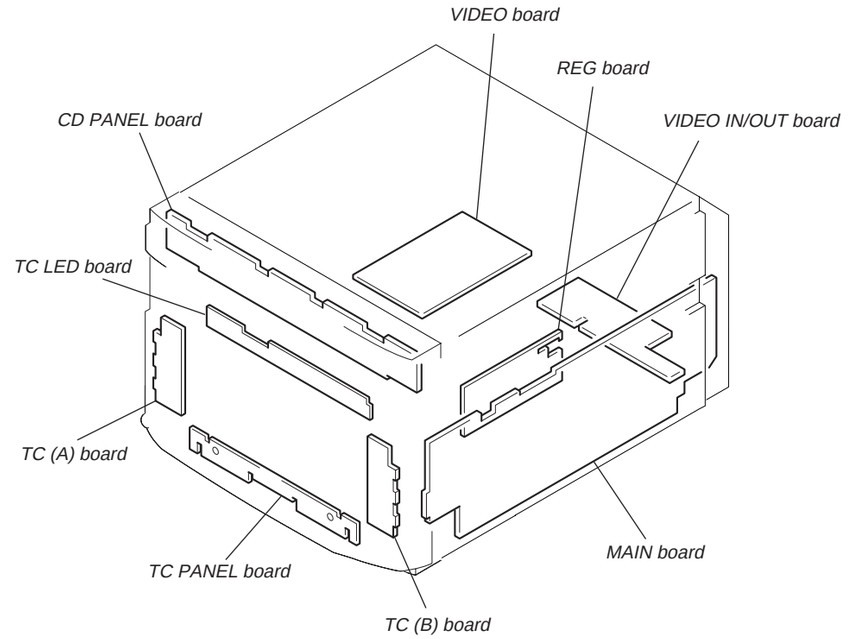
1. Connect the frequency counter to TP508 (27 MHz) on VIDEO board.
2. Turned power switch on.
3. Press the FUNCTION button to select the CD.
4. Adjust CT503 on the VIDEO board so that the frequency counter reading 27.0 MHz ± 80 Hz at stop status.

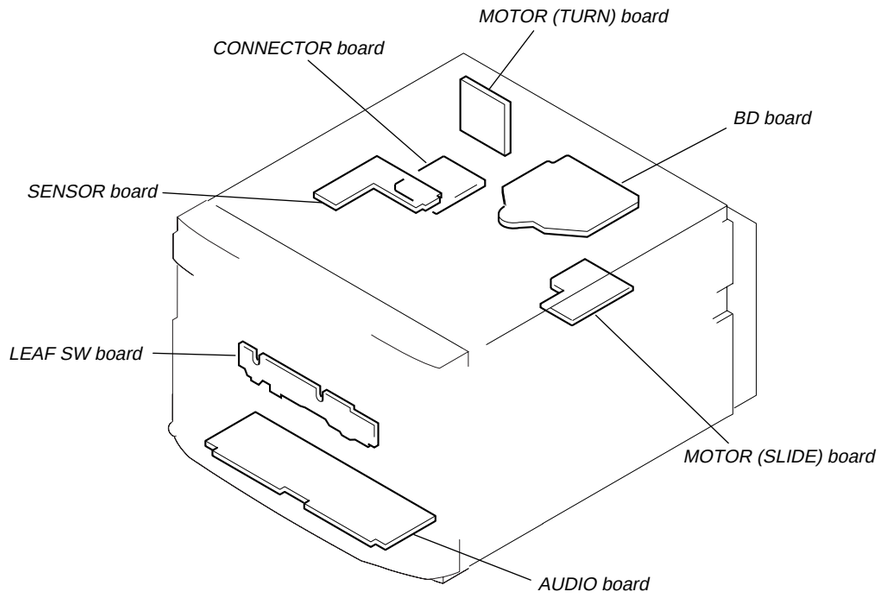
Adjustment Location:
[VIDEO BOARD] (Side A)



SECTION 6
DIAGRAMS

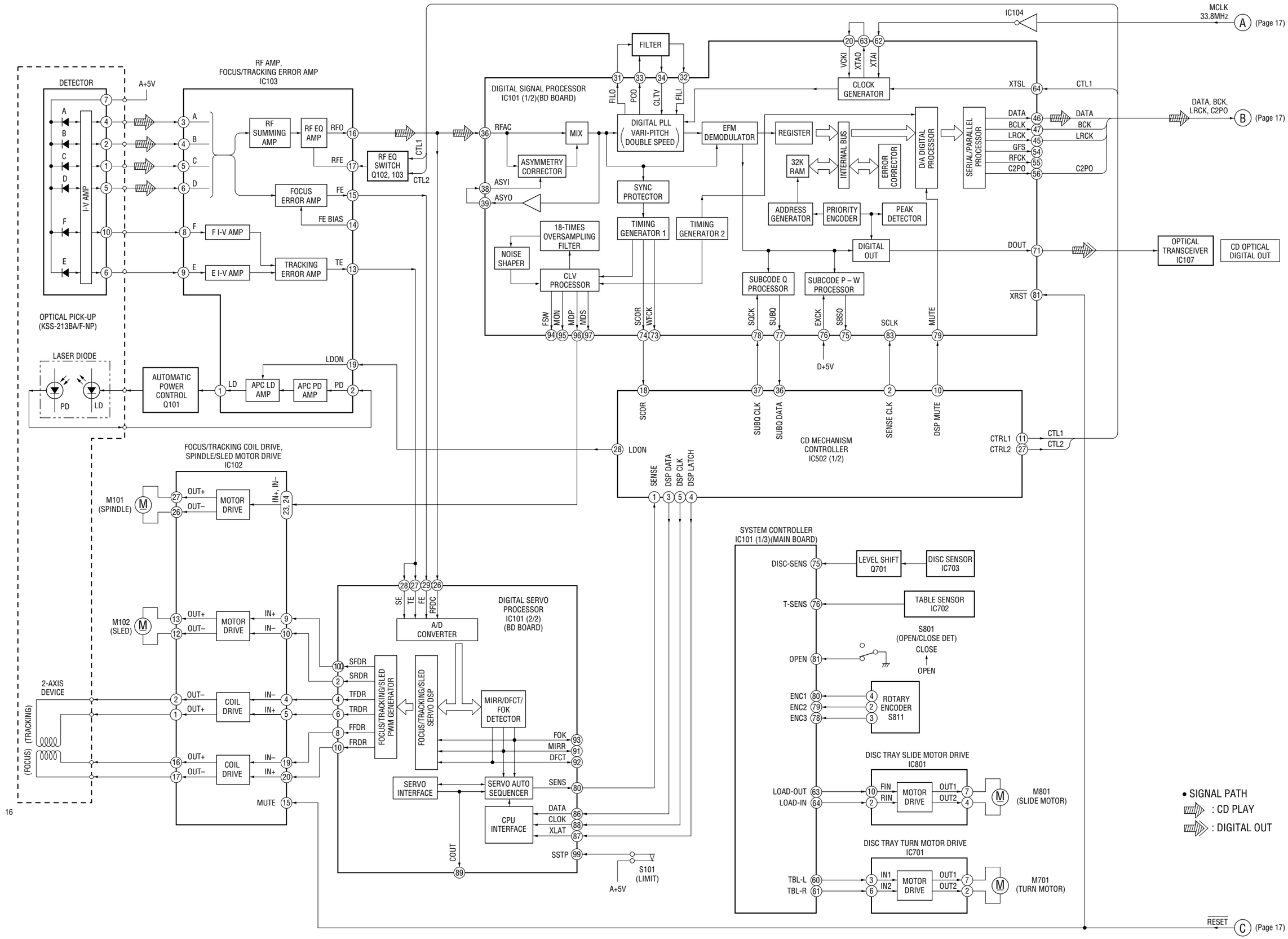
6-1. CIRCUIT BOARDS LOCATION





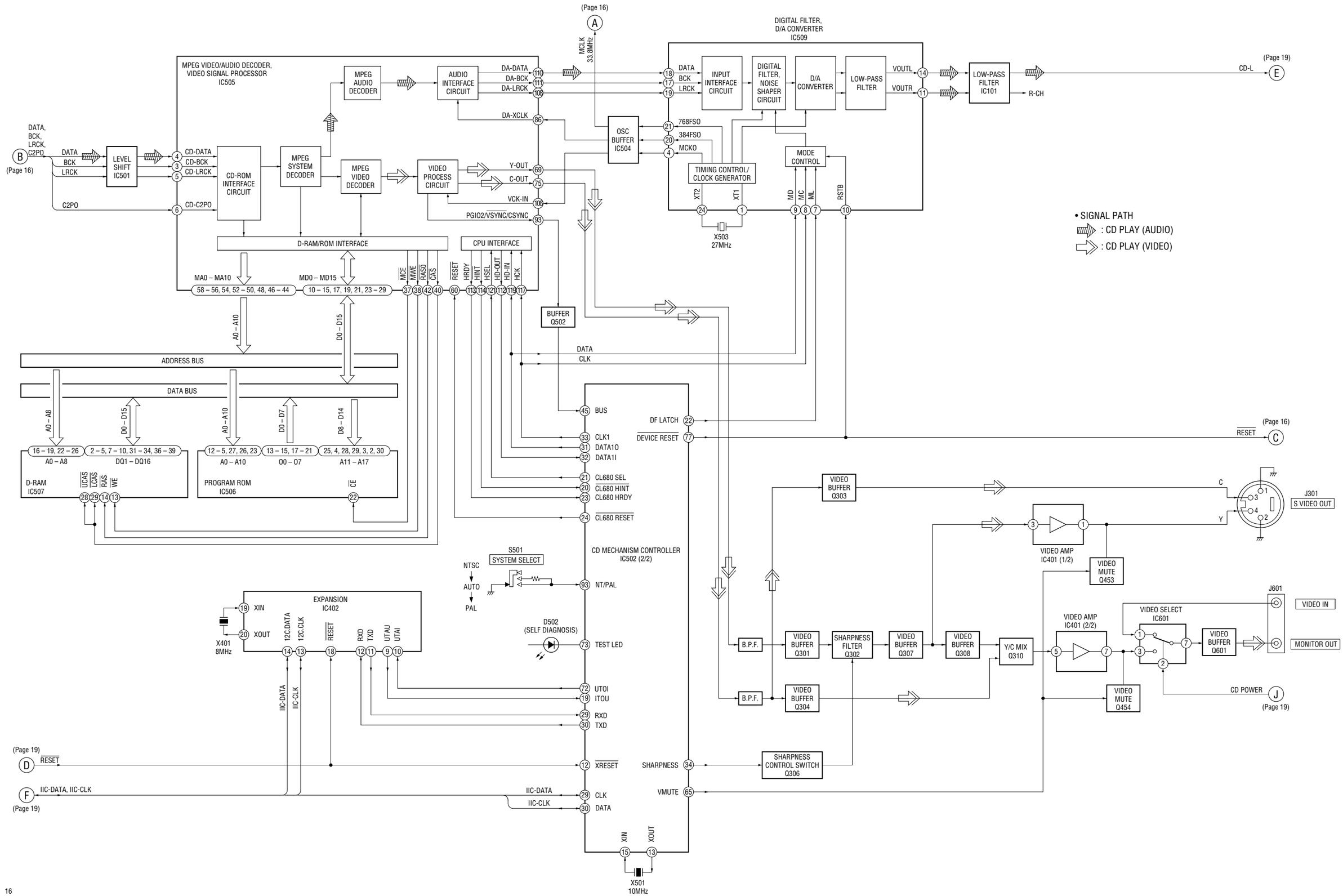
6-2. BLOCK DIAGRAMS

SERVO SECTION

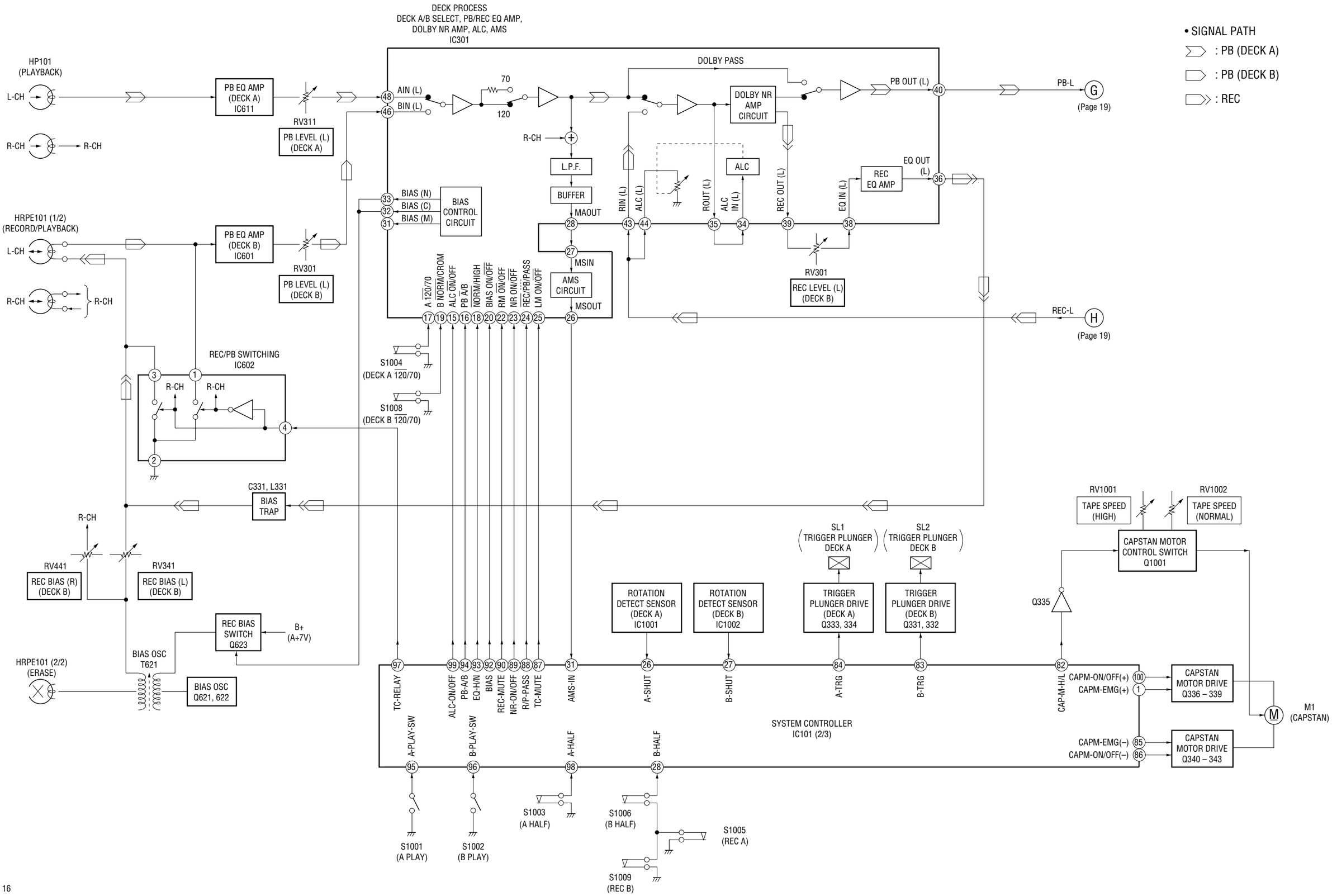


16

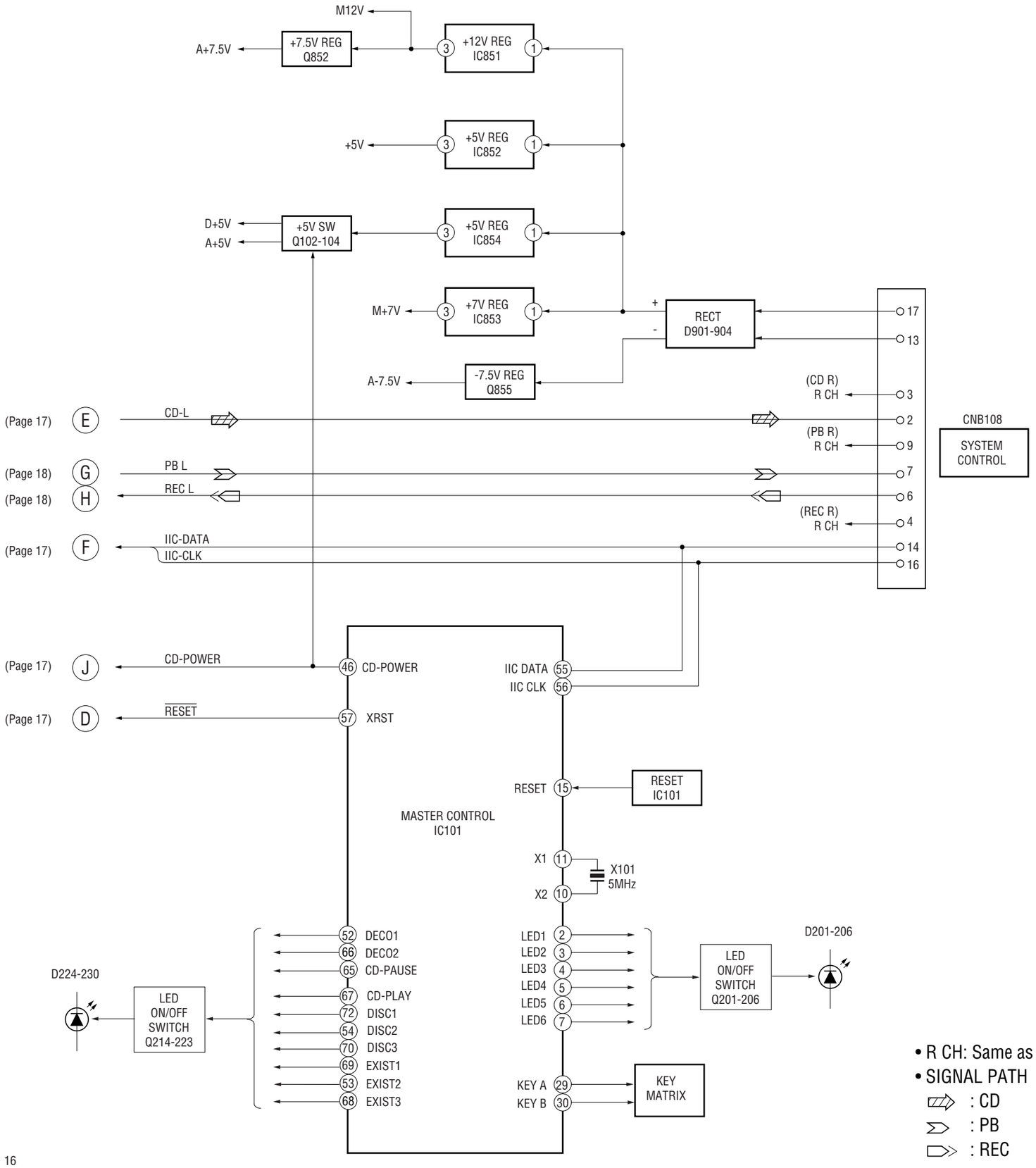
AUDIO/VIDEO CD SECTION



TAPE DECK SECTION



POWER SECTION



- R CH: Same as L ch
- SIGNAL PATH
  - : CD
  - : PB
  - : REC

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B– : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : AM
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CD (AUDIO)
  - : CD (VIDEO)
  - : DIGITAL OUT

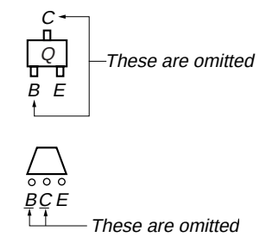
For printed wiring boards.

Note:

- : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.

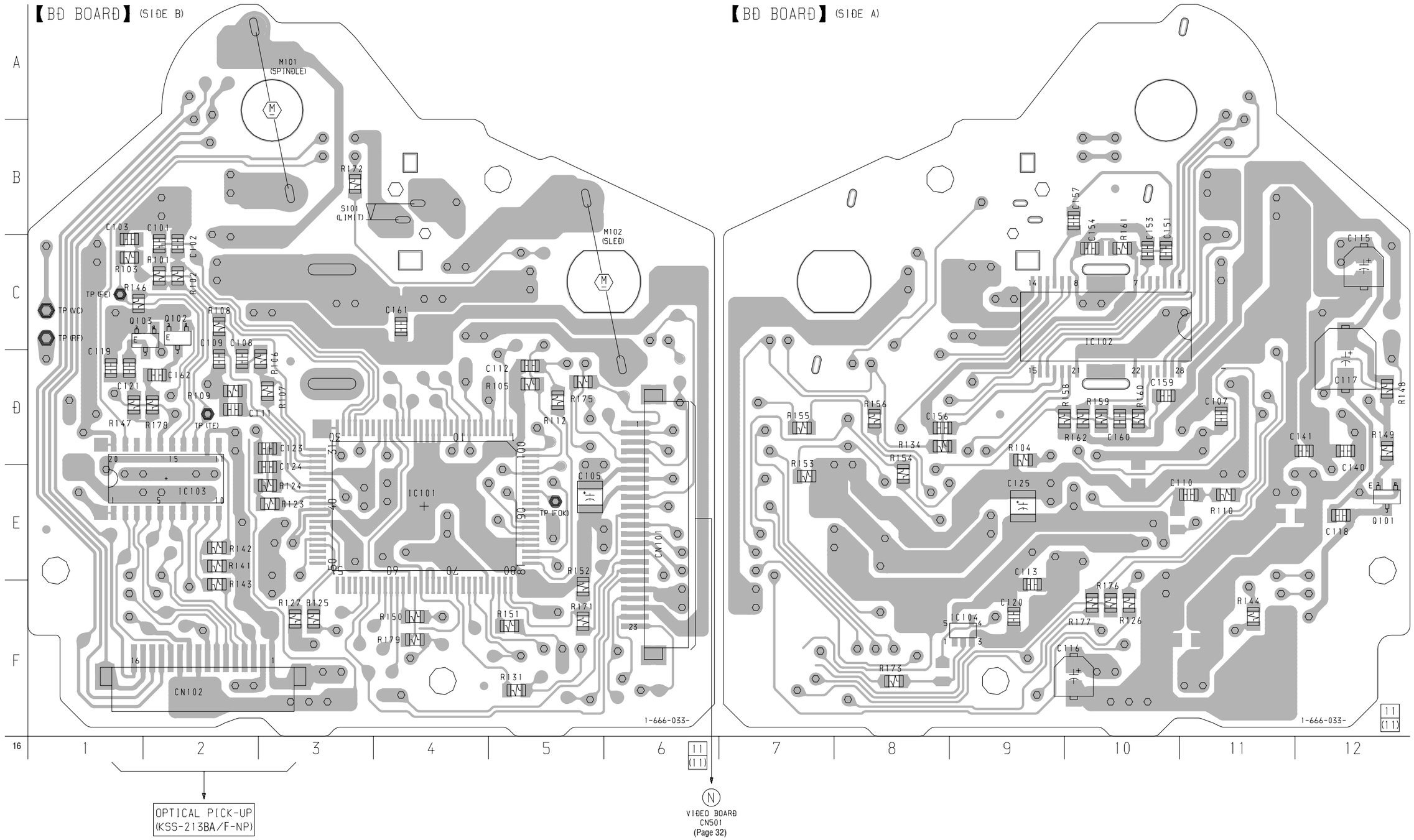
(The other layers' patterns are not indicated.)

- Abbreviation
  - HK : Hong Kong model
  - SP : Singapore model
  - MY : Malaysia model
  - EA : Saudi Arabia model
  - TH : Thai model
  - IA : Indonesia model
- **Indication of transistor**



6-3. PRINTED WIRING BOARD CD SECTION

• Refer to page 15 for Circuit Boards Location.

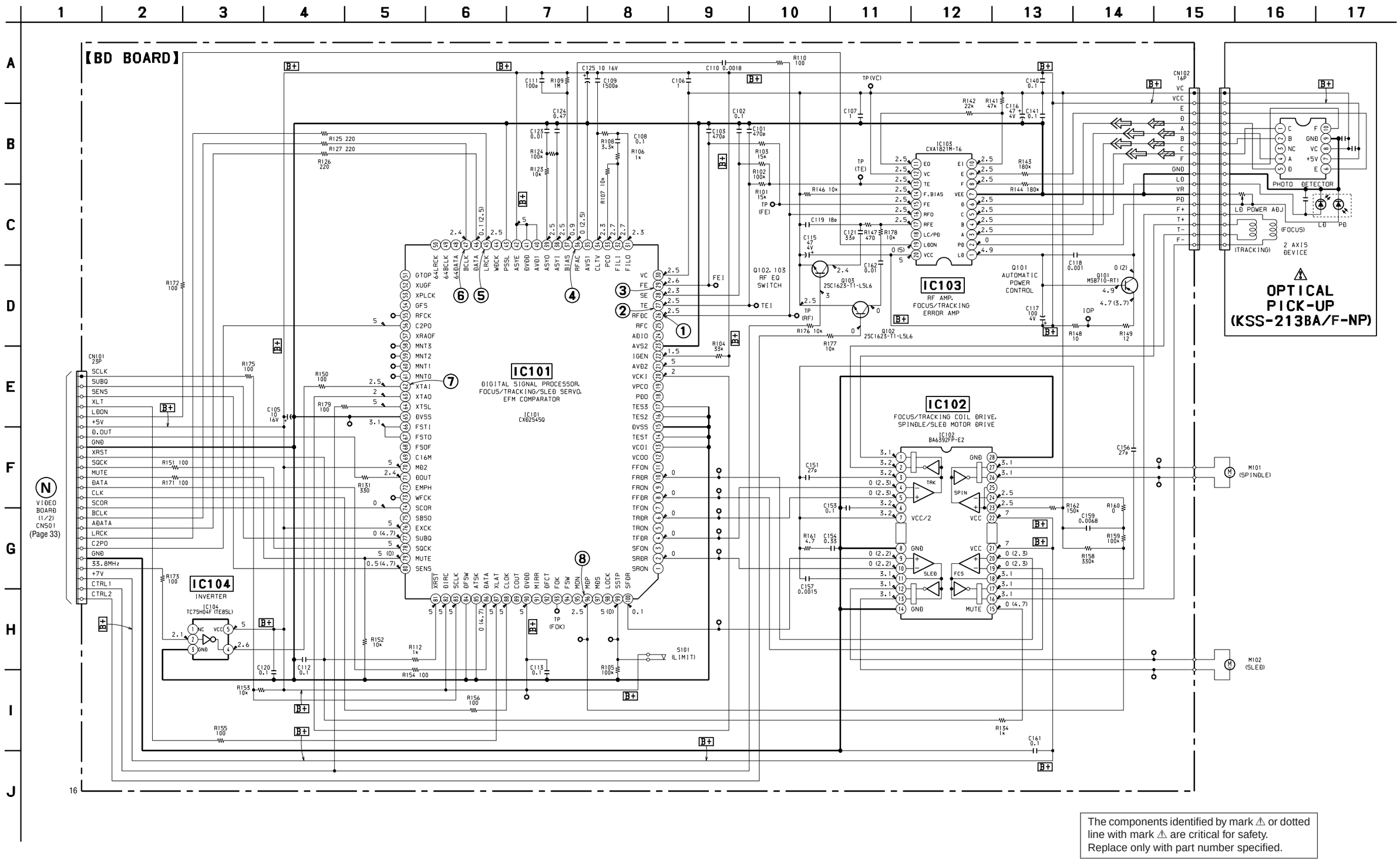


• **Semiconductor Location**

Ref. No.	Location
IC101	E-4
IC102	C-10
IC103	E-2
IC104	F-9
Q101	E-12
Q102	C-2
Q103	C-2

6-4. SCHEMATIC DIAGRAM CD SECTION

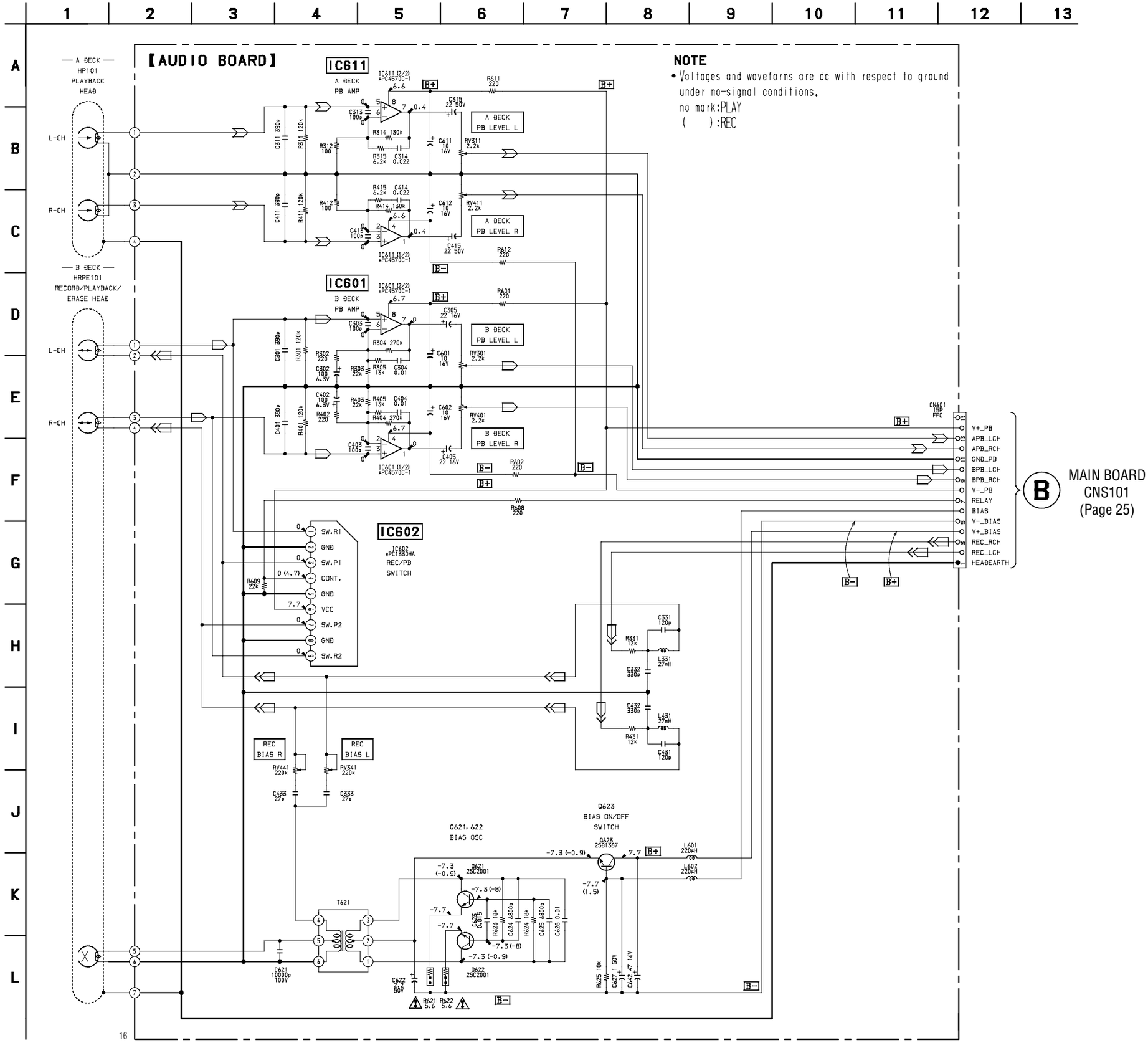
- Refer to page 35 for Waveforms.
- Refer to page 38, 39 for IC Block Diagrams.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-5. SCHEMATIC DIAGRAM DECK SECTION

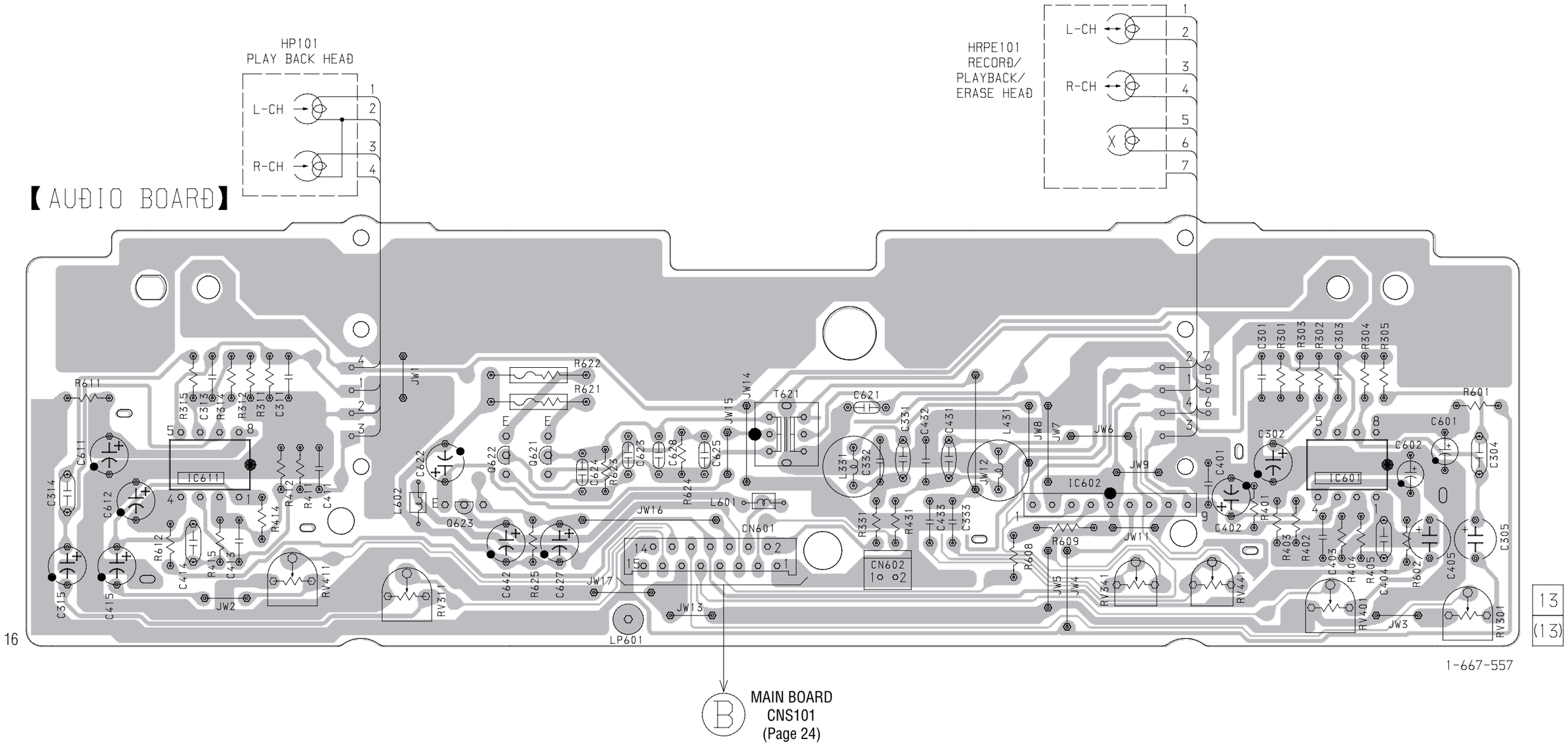
• Refer to page 39 for IC Block Diagrams.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

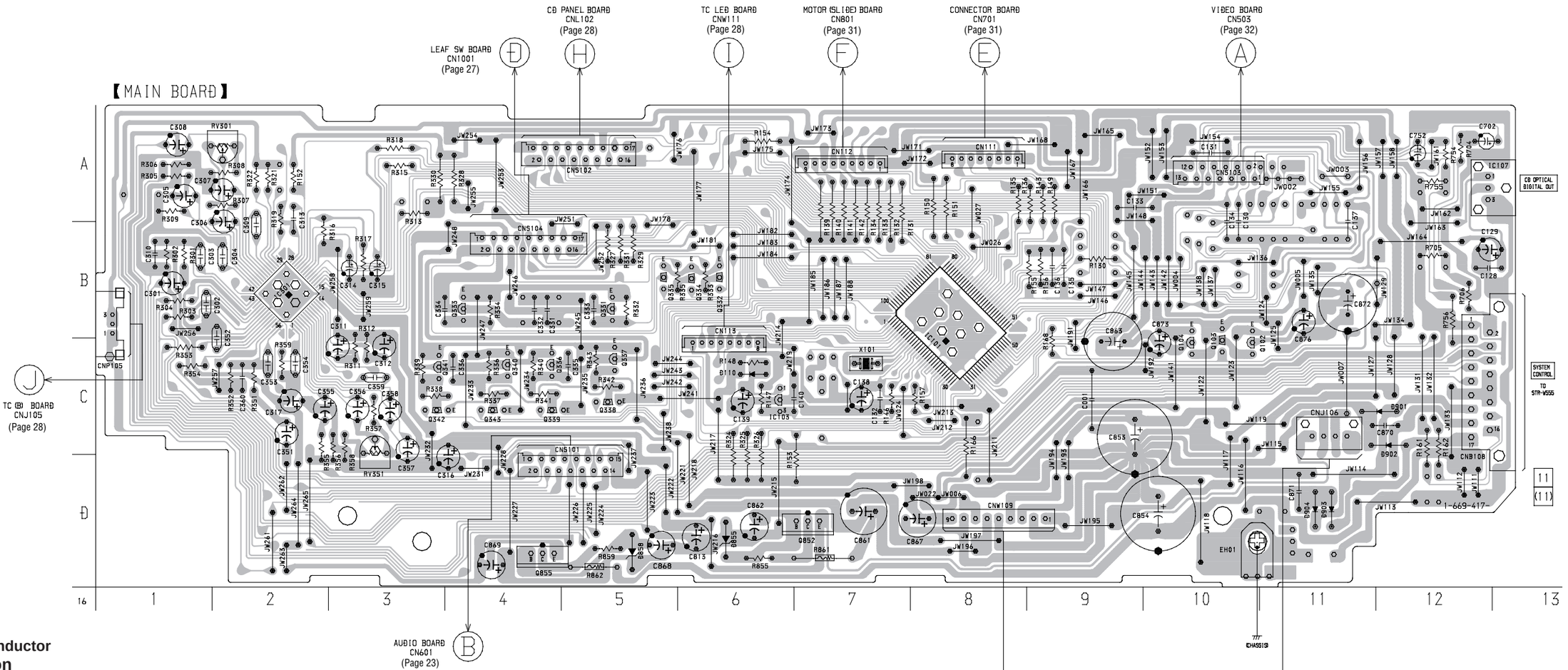
6-6. PRINTED WIRING BOARD DECK SECTION

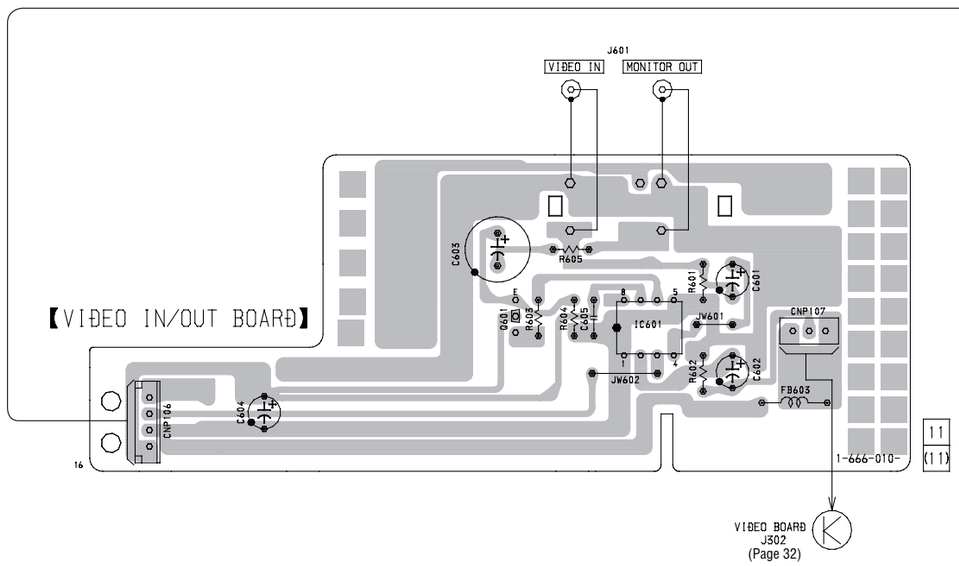
• Refer to page 15 for Circuit Boards Location.

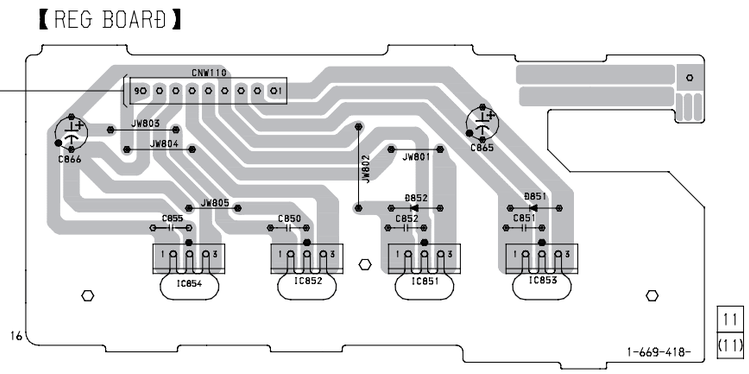


6-7. PRINTED WIRING BOARD MAIN SECTION

• Refer to page 15 for Circuit Boards Location.





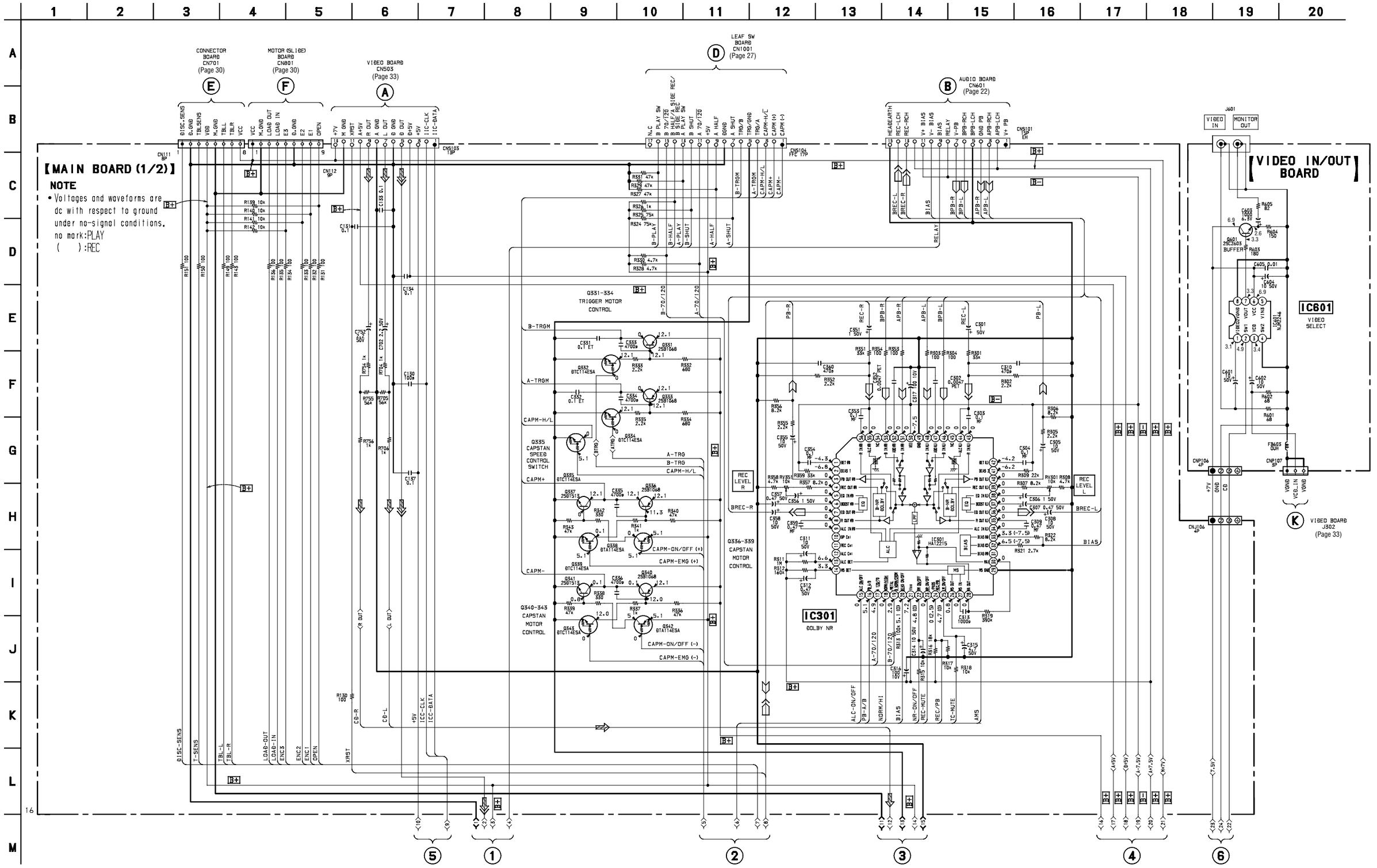


• **Semiconductor Location**

Ref. No.	Location
D110	C-6
D855	D-6
D858	D-5
D901	C-12
D902	C-12
D903	D-11
D904	D-11
IC101	B-8
IC103	C-6
IC107	A-13
IC301	B-2
Q102	C-10
Q103	C-10
Q104	C-10
Q331	B-5
Q332	B-6
Q333	B-4
Q334	B-6
Q335	B-5
Q336	C-4
Q337	C-5
Q338	C-5
Q339	C-4
Q340	C-4
Q341	C-3
Q342	C-3
Q343	C-4
Q852	D-7
Q855	D-4

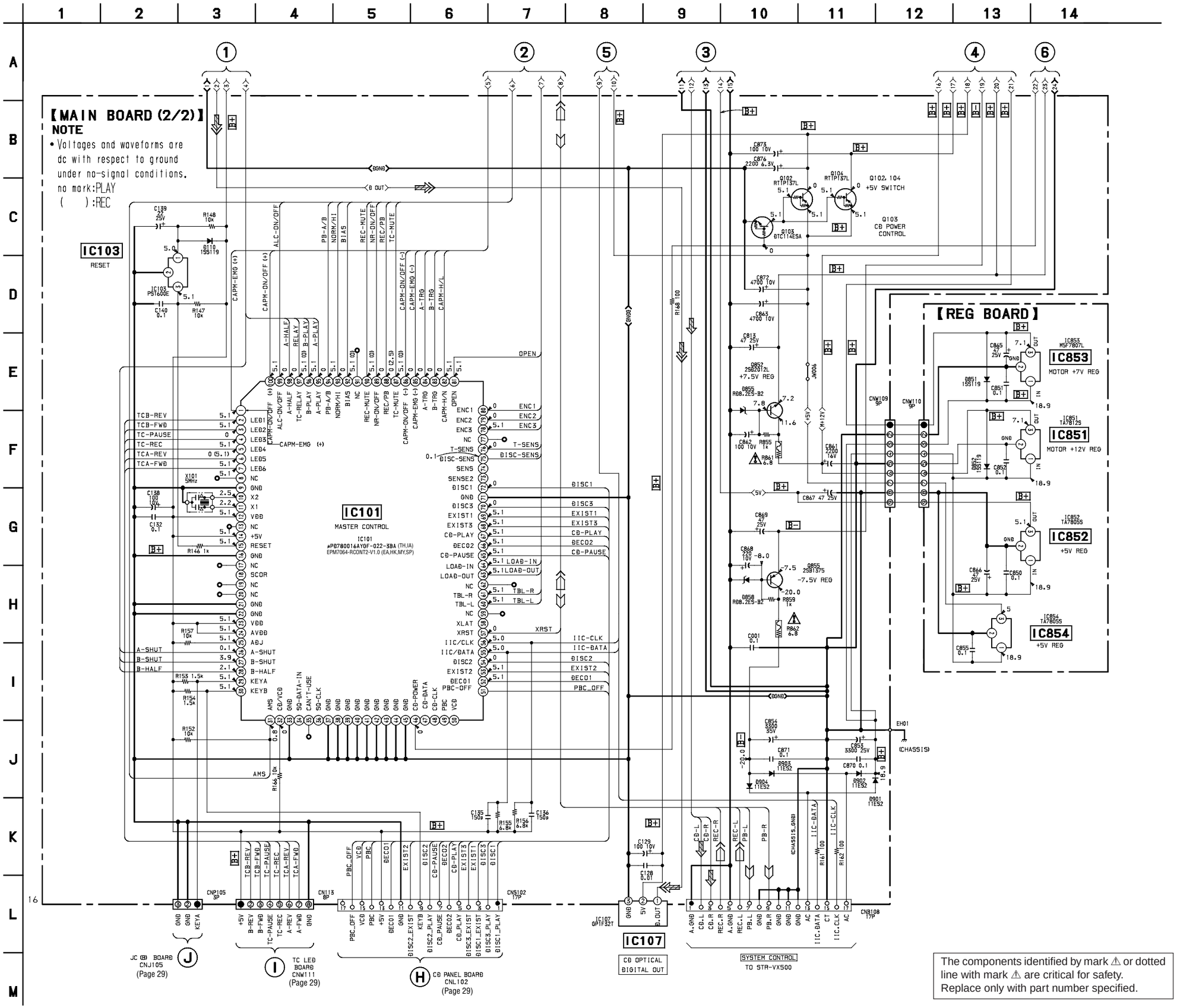
6-8. SCHEMATIC DIAGRAM MAIN (1/2) SECTION

• Refer to page 39 for IC Block Diagrams.


【MAIN BOARD (1/2)】
NOTE
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:PLAY
( ):REC
CONNECTOR BOARD CN701 (Page 30)
MOTOR (SLIDE) BOARD CN801 (Page 30)
VIDEO BOARD CN505 (Page 33)
LEAF SW BOARD CN1001 (Page 27)
AUDIO BOARD CN601 (Page 22)
【VIDEO IN/OUT BOARD】
IC601 VIDEO SELECT
IC301 DOLBY NR
Q331-334 TRIGGER MOTOR CONTROL
Q335 CAPSTAN SPEED CONTROL SWITCH
Q336-339 CAPSTAN MOTOR CONTROL
Q340-343 CAPSTAN MOTOR CONTROL
K VIDEO BOARD J302 (Page 33)

6-9. SCHEMATIC DIAGRAM MAIN (2/2) SECTION

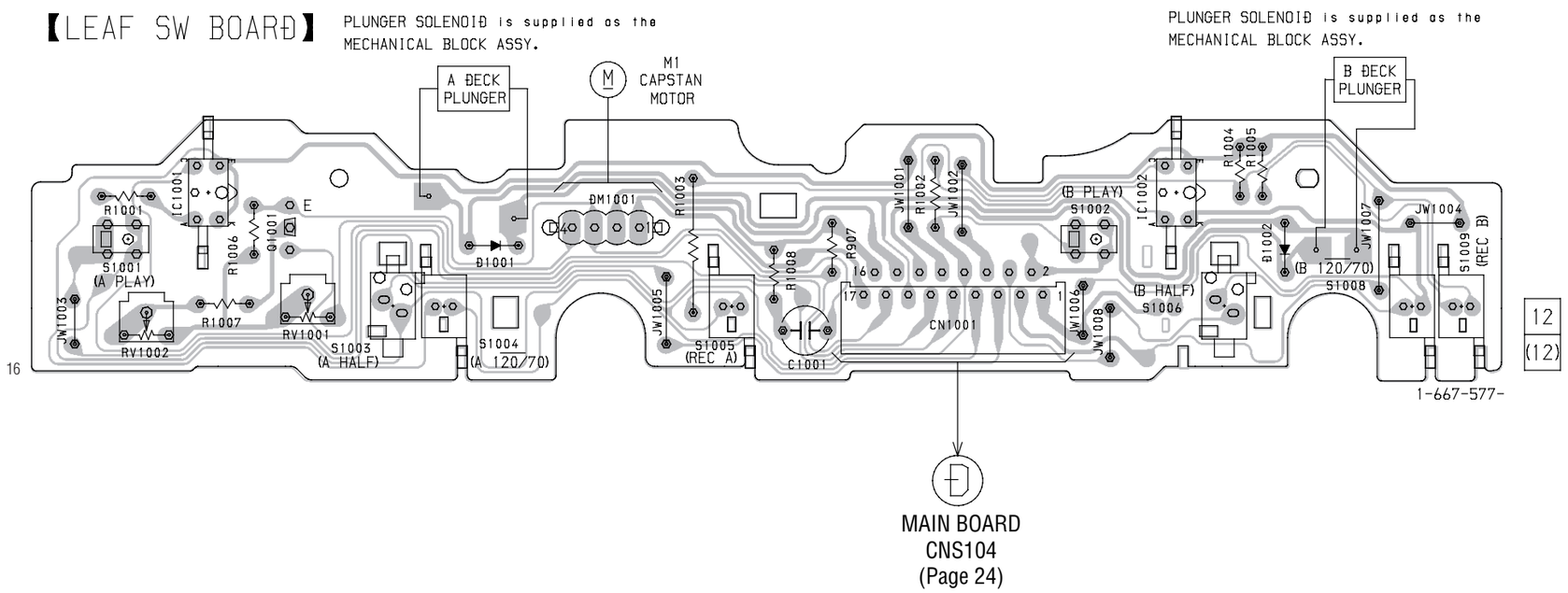
• Refer to page 24 for Printed Wiring Board.
• Refer to page 41 for IC Pin Function Description.



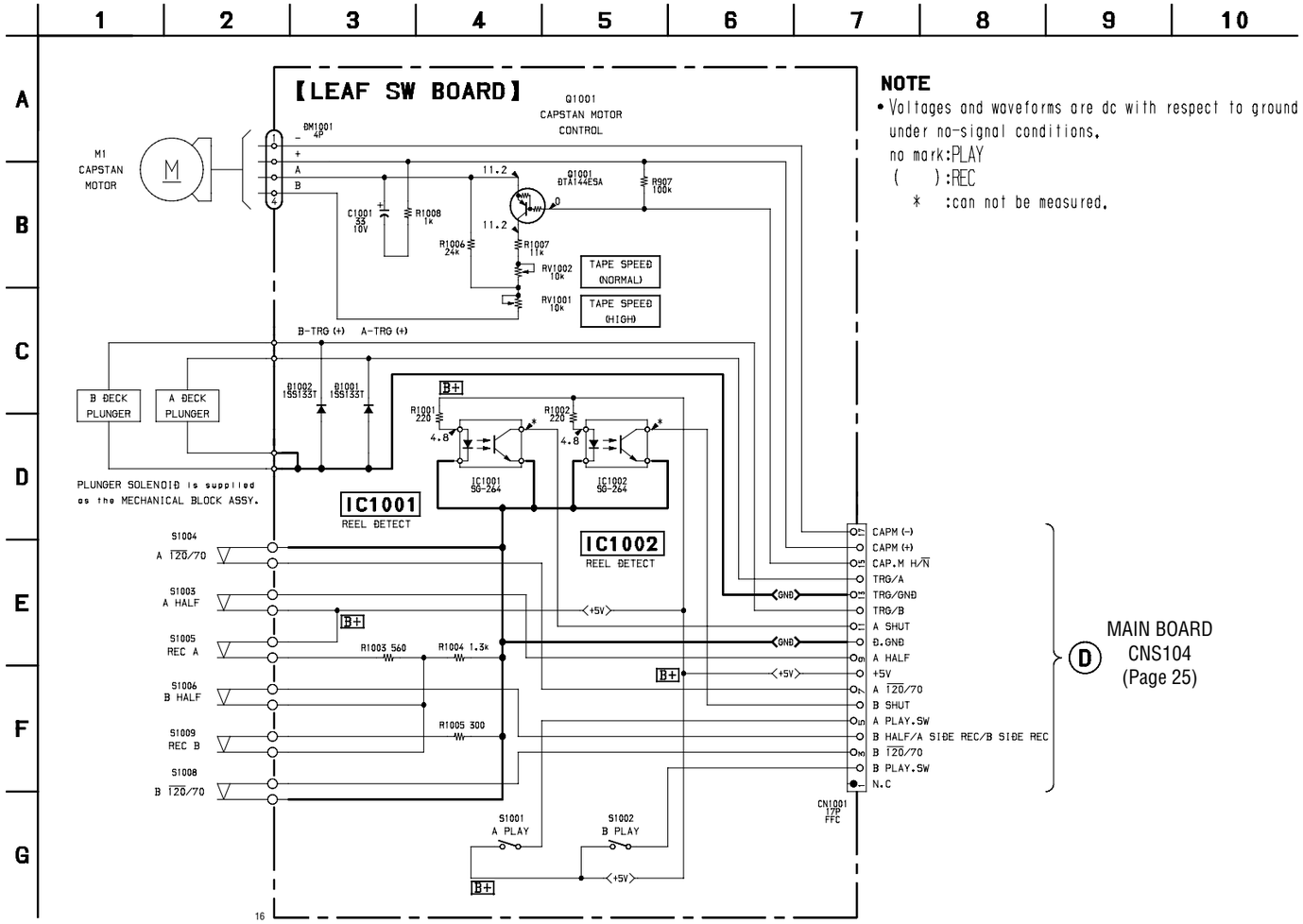
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-10. PRINTED WIRING BOARD LEAF SW SECTION

• Refer to page 15 for Circuit Boards Location.



6-11. SCHEMATIC DIAGRAM LEAF SW SECTION



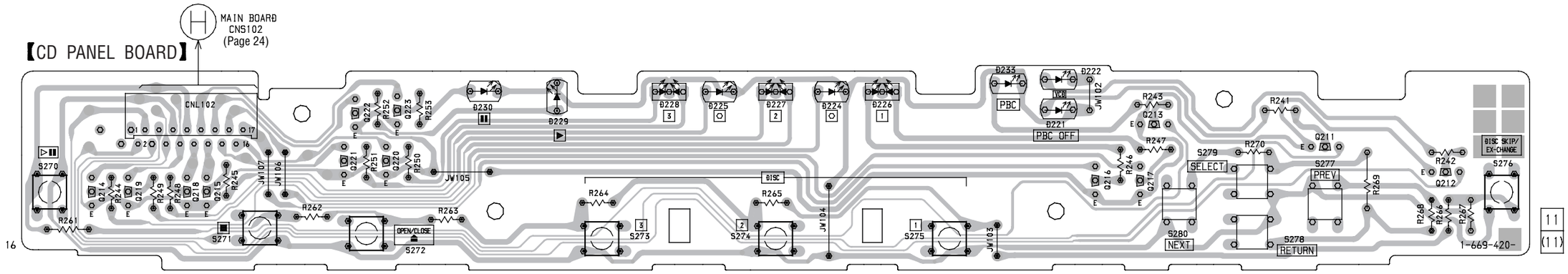
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:PLAY
  ( ):REC
  * :can not be measured.

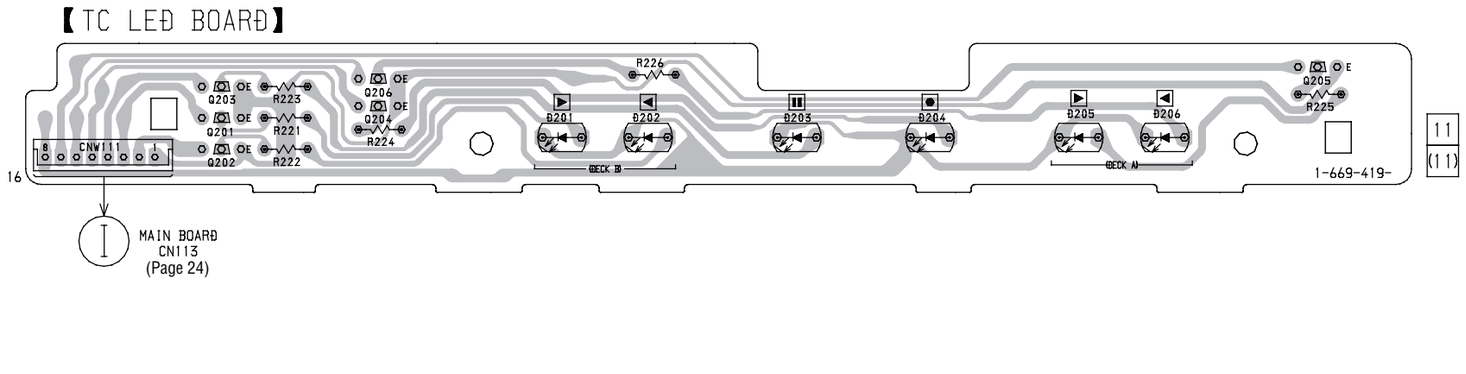
6-12. PRINTED WIRING BOARD PANEL SECTION

• Refer to page 15 for Circuit Boards Location.

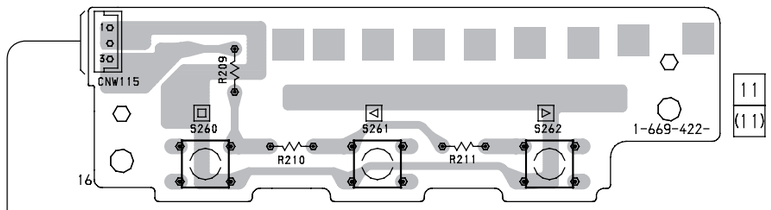
【CD PANEL BOARD】



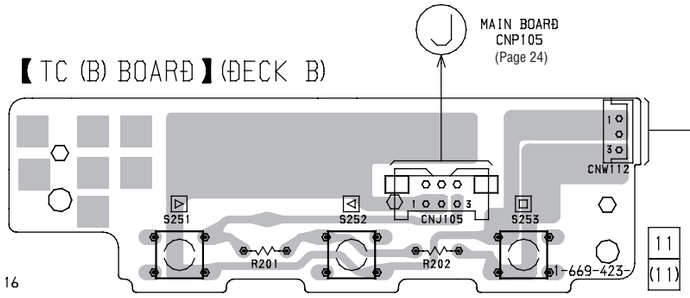
【TC LED BOARD】



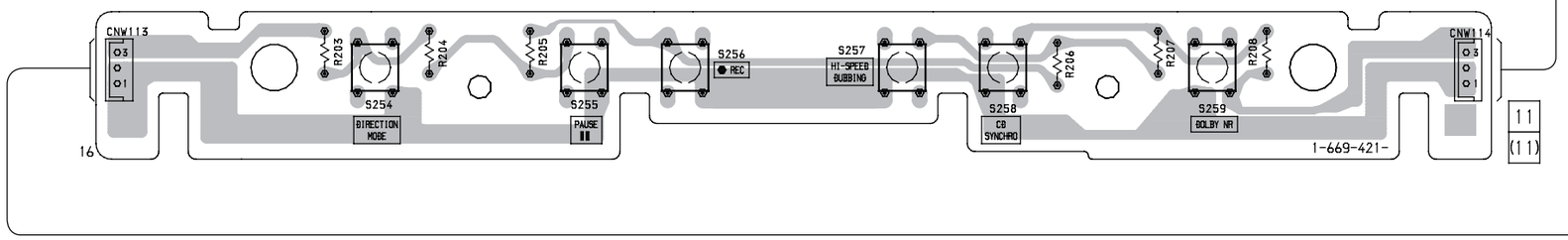
【TC (A) BOARD】(DECK A)



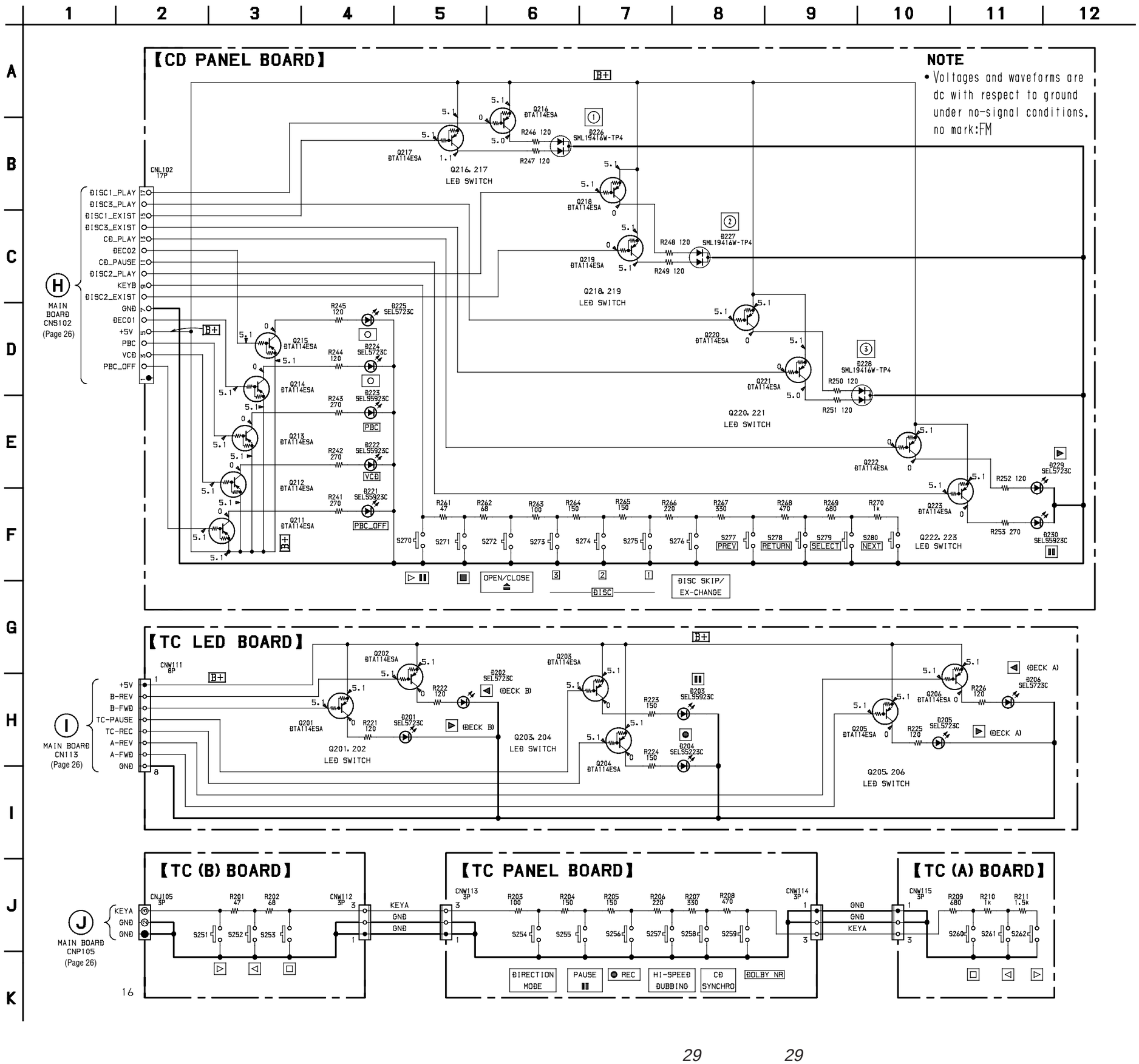
【TC (B) BOARD】(DECK B)



【TC PANEL BOARD】

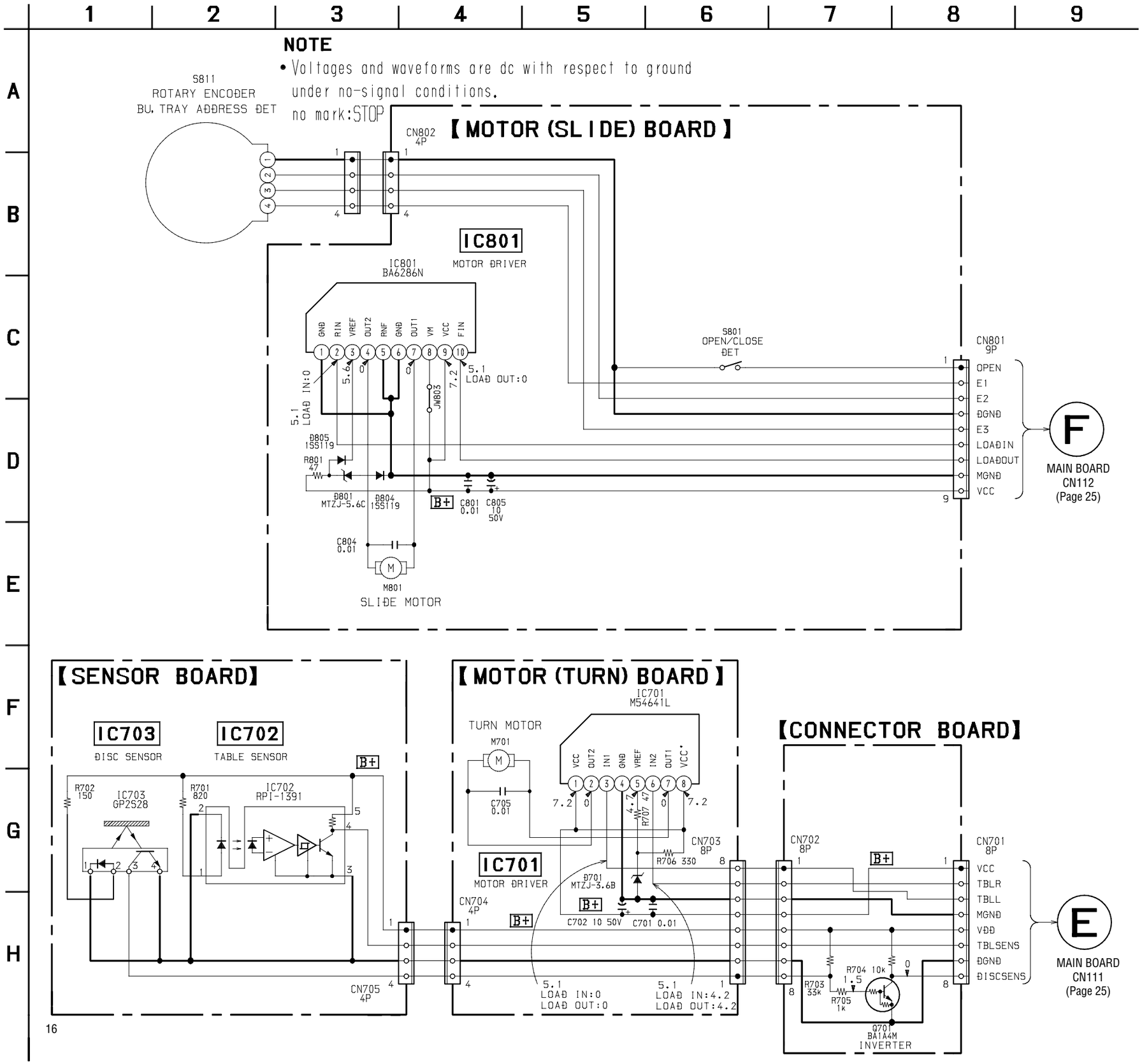


6-13. SCHEMATIC DIAGRAM PANEL SECTION



6-14. SCHEMATIC DIAGRAM CD MOTOR SECTION

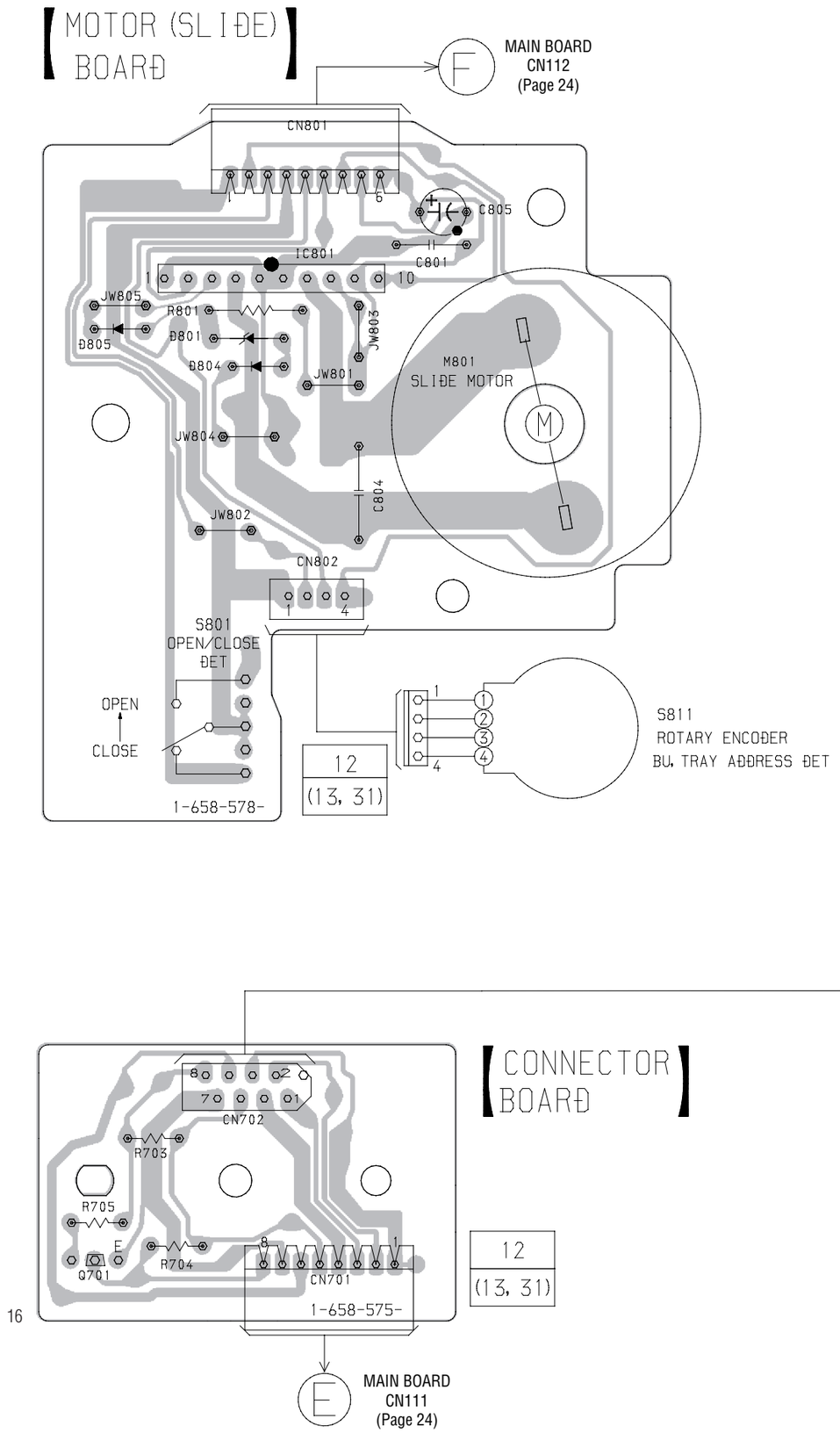
• Refer to page 39 for IC Block Diagrams.



16

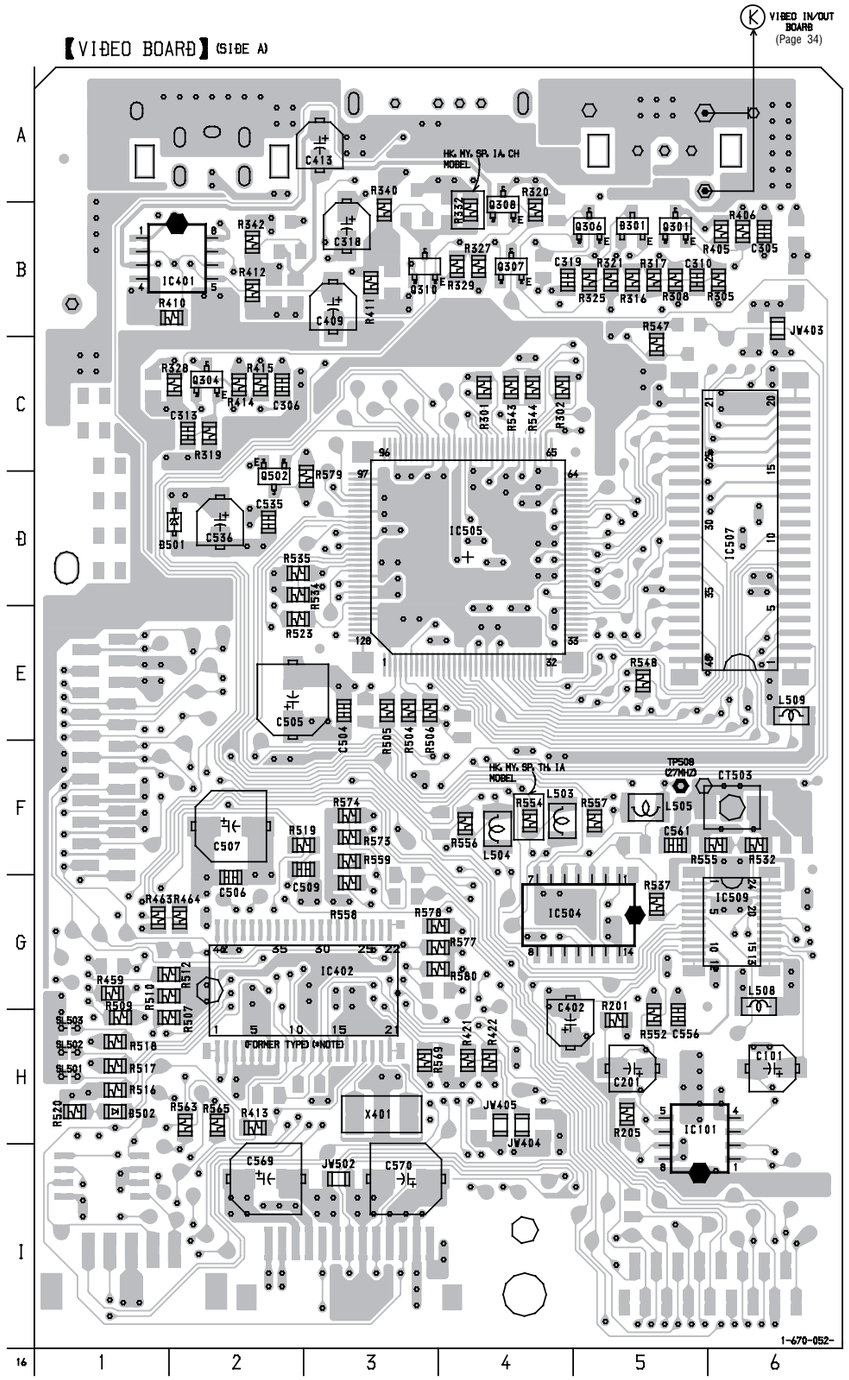
6-15. PRINTED WIRING BOARD CD MOTOR SECTION

• Refer to page 15 for Circuit Boards Location.



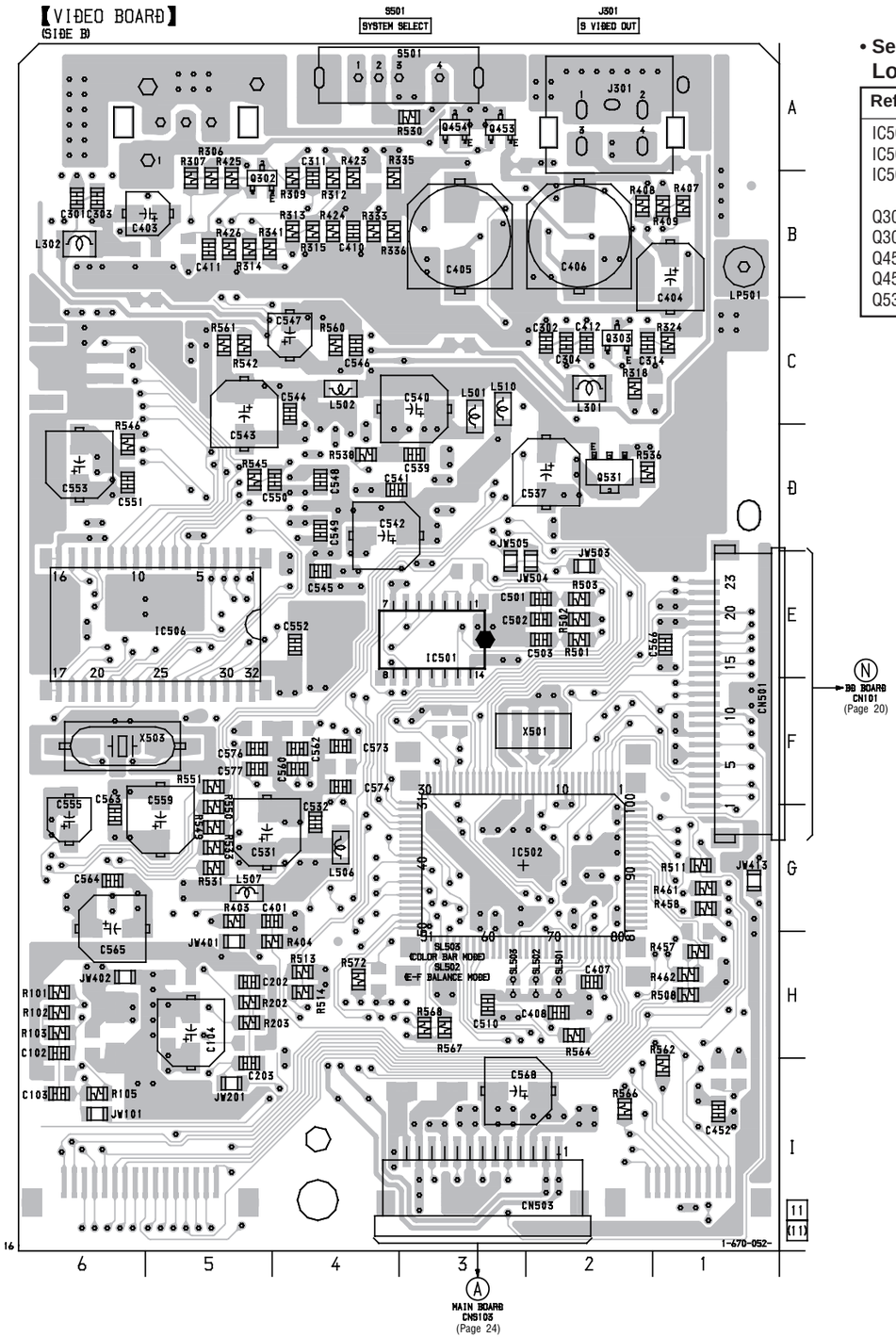
6-16. PRINTED WIRING BOARD VIDEO SECTION

• Refer to page 15 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D301	B-5
D501	D-2
D502	H-1
IC101	H-5
IC401	B-2
IC402	G-3
IC504	G-4
IC505	D-4
IC507	D-6
IC509	G-6
Q301	B-5
Q304	C-2
Q306	B-5
Q307	B-4
Q308	B-4
Q310	B-3
Q502	D-2

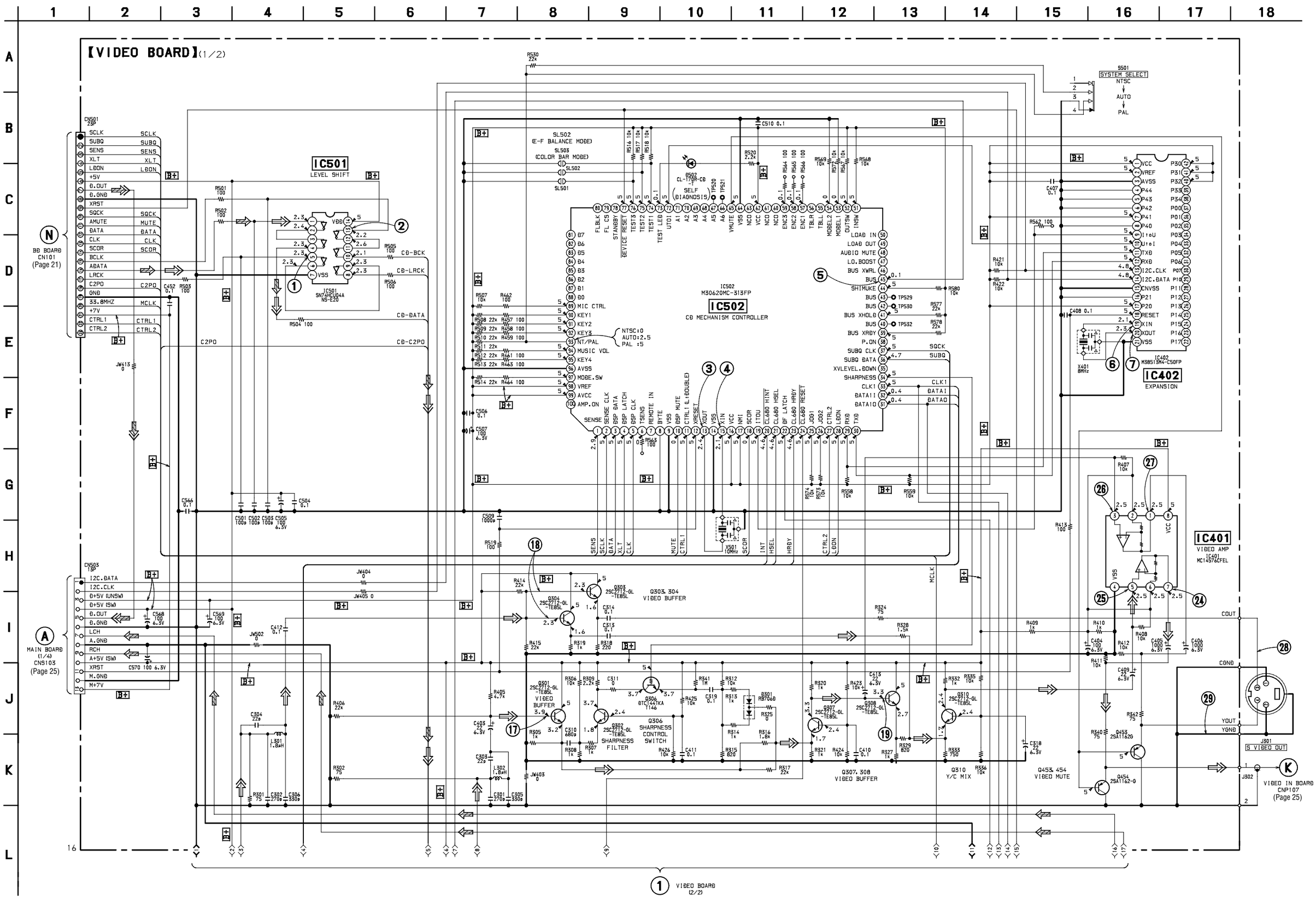


• **Semiconductor Location**

Ref. No.	Location
IC501	E-3
IC502	G-3
IC506	E-5
Q302	B-5
Q303	C-2
Q453	A-3
Q454	A-3
Q531	D-2

6-17. SCHEMATIC DIAGRAM VIDEO (1/2) SECTION

- Refer to page 42 for IC Pin Function Description.
- Refer to page 35 to 37 for Waveforms.



6-18. SCHEMATIC DIAGRAM VIDEO (2/2) SECTION

• Refer to page 32 for Printed Wiring Board. • Refer to page 35 to 37 for Waveforms.
• Refer to page 39 for IC Block Diagrams. • Refer to page 44 for IC Pin Function Description.

【VIDEO BOARD】(2/2)

IC505
MPEG VIDEO/AUDIO DECODER, VIDEO SIGNAL PROCESSOR
IC505 CL680

IC509
DIGITAL FILTER, D/A CONVERTER
IC509 PCM1727E-2

IC101
LOW-PASS FILTER
IC101 (1/2) NJM2100M
IC101 (2/2) NJM2100M

IC507
D-RAM
IC507 MB814260-70PJER

IC506
PROGRAM ROM
IC506 LC372100PM

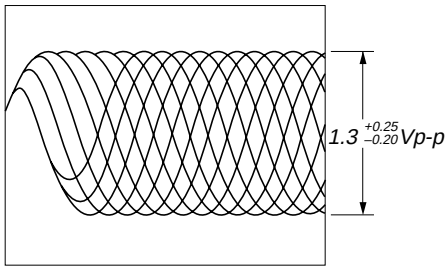
IC504
OSC BUFFER
IC504 SN74HCU04A NS-E20

Q501 2SB599-T1-CLCK +3.3V REGULATOR
Q502 2SC2712 BUFFER
D501 UDZ-TE-17-3.9B
VIDEO FREQUENCY
X503 27MHz
TP526
TP501 TP502 TP503 TP504 TP505 TP506 TP507 TP508 TP510 TP511 TP512 TP513 TP514 TP515 TP516 TP517 TP518 TP519
JW101 JW201 JW401 JW402 JW503 JW504 JW505
BATAI HRBY INT CLK1 BATAO HSEL
CB-BCK CB-BATA CB-LRCK CB-C2PO

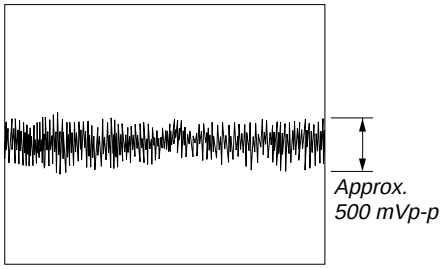
• **Waveforms**

BD BOARD

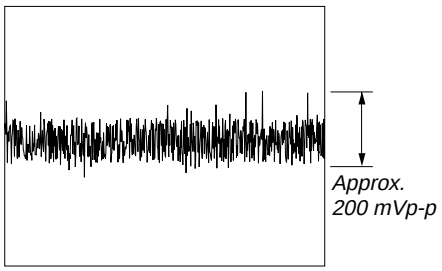
❶ IC101 ㉖ (RFDC) 200 mV/DIV, 500 ns/DIV



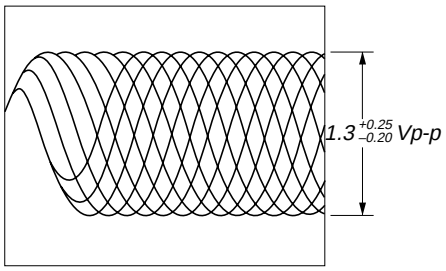
❷ IC101 ㉗ (TE) 200 mV/DIV, 100 µs/DIV



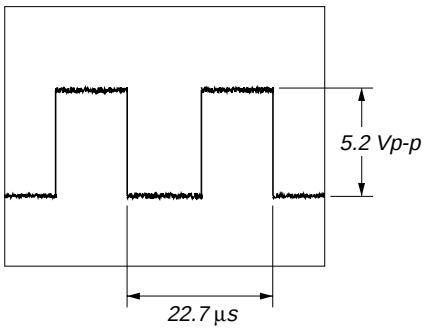
❸ IC101 ㉙ (FE) 200 mV/DIV, 50 ns/DIV



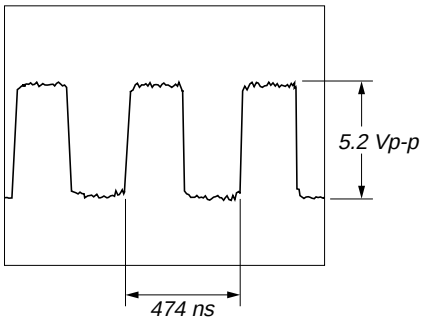
❹ IC101 ㊱ (RFAC) 200 mV/DIV, 500 ns/DIV



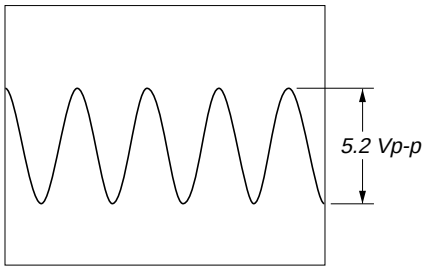
❺ IC101 ㊺ (LRCK)



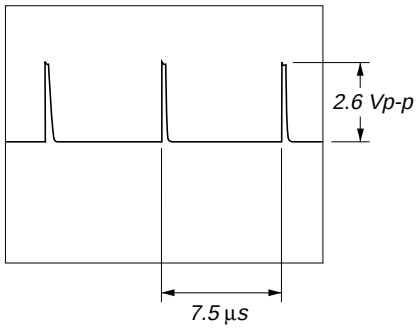
❻ IC101 ㊼ (BCLK)



❼ IC101 ㊷ (XTAI)

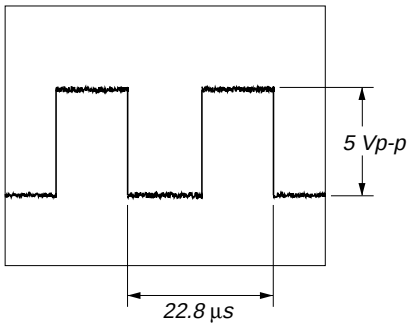


❽ IC101 ㊻ (MDP)

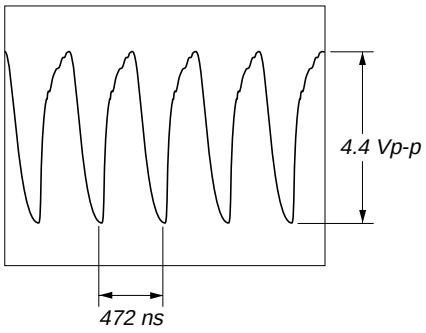


VIDEO BOARD

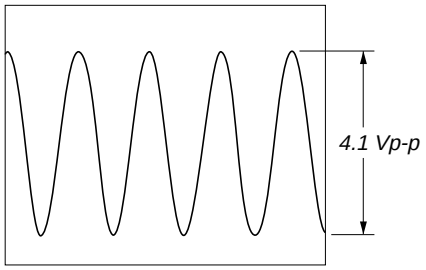
❶ IC501 ⑤ (LRCK)



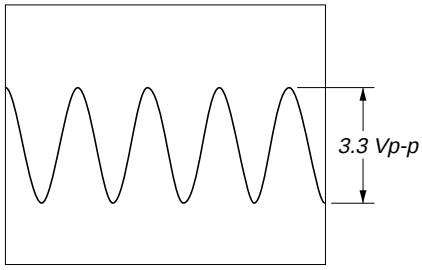
❷ IC501 ⑬ (BCLK)



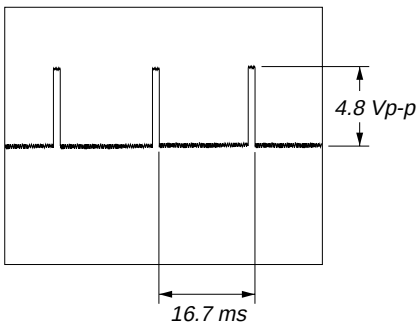
❸ IC502 ⑬ (XOUT)



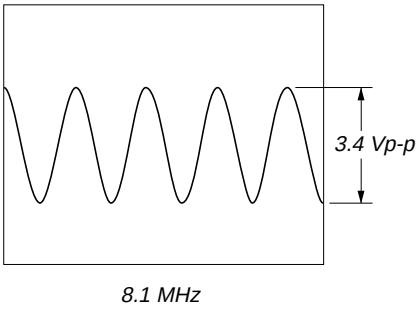
❹ IC502 ⑮ (XIN)



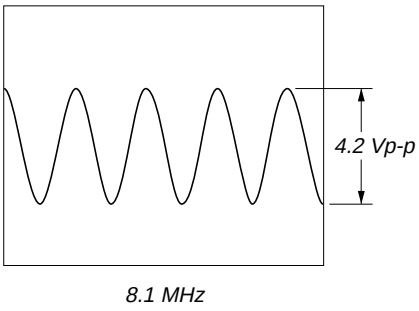
❺ IC502 ㊺ (BUS)



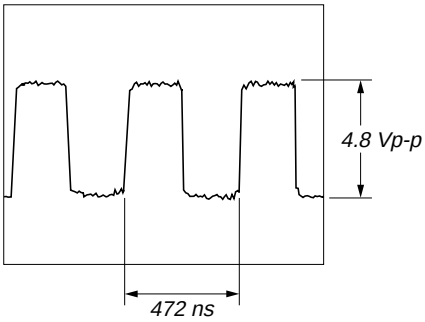
❻ IC402 ⑲ (XIN)



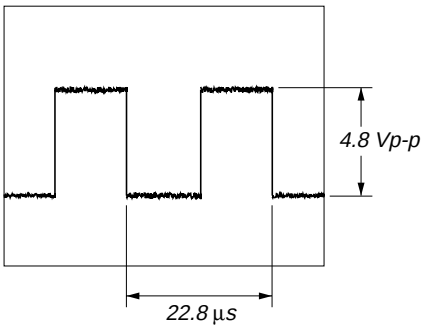
❼ IC402 ⑳ (XOUT)



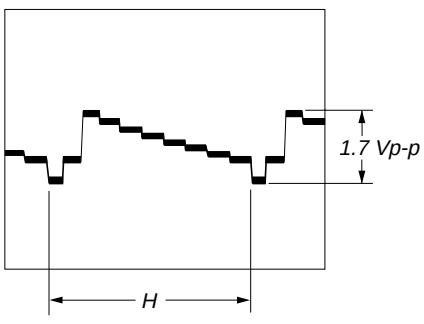
❽ IC505 ③ (CD-BCK)



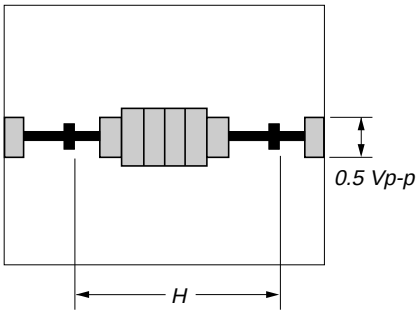
❾ IC505 ⑤ (CD-LRCK)



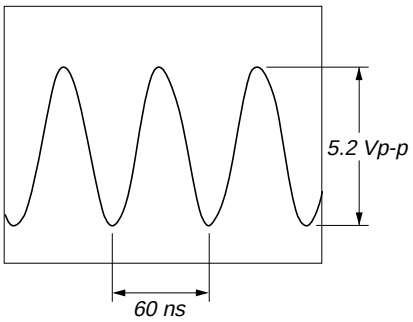
❿ IC505 ⑥⑨ (Y-OUT)



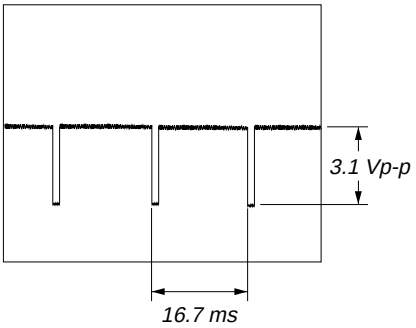
⓫ IC505 ⑦⑤ (C-OUT)



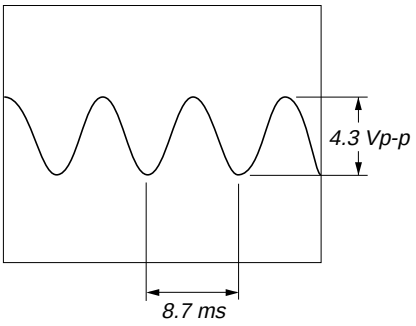
⓬ IC505 ⑧⑥ (DA-XCLK)



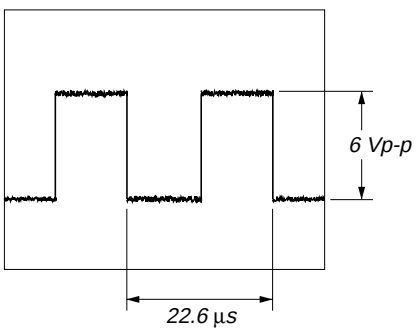
⓭ IC505 ⑨③ (PGIO2/VSYNK/CSYNK)



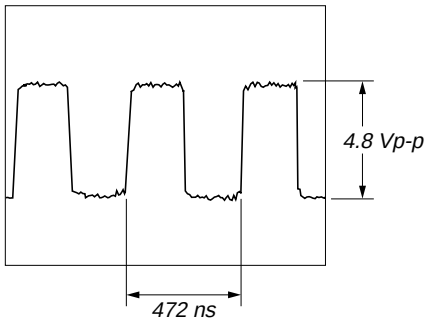
⓮ IC505 ⑩⑥ (VCK-IN)



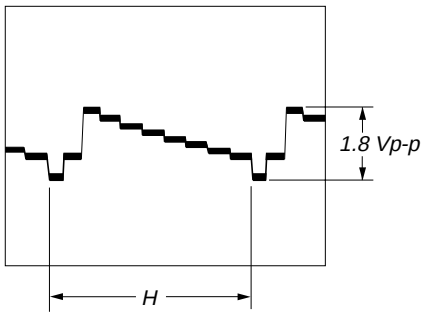
⓯ IC505 ⑩⑧ (DA-LRCK), IC509 ⑲ (LRCK)



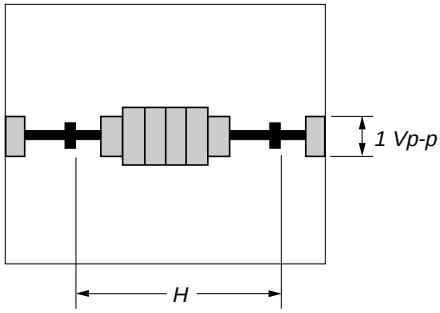
⓰ IC505 ⑪① (DA-BCK), IC509 ⑰ (BCK)



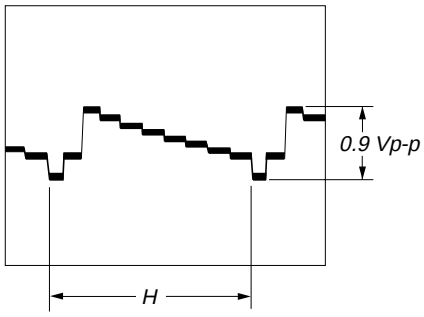
⓱ Q301 (Base)



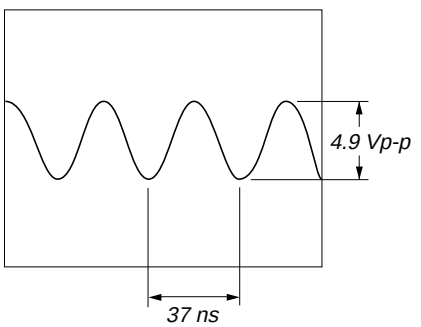
⓲ Q303, 304 (Base)



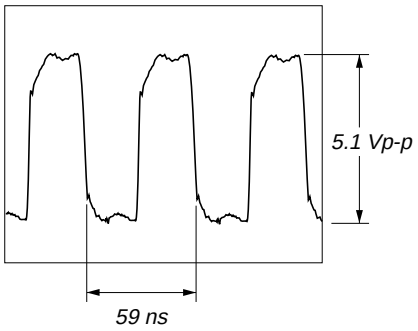
⓳ Q308 (Base)



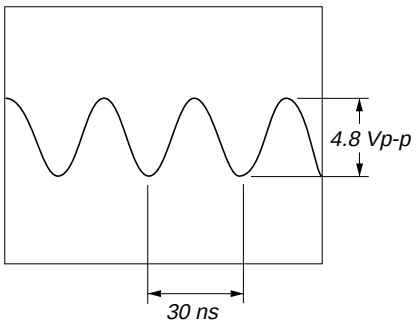
⓴ IC509 ④ (MCKO)



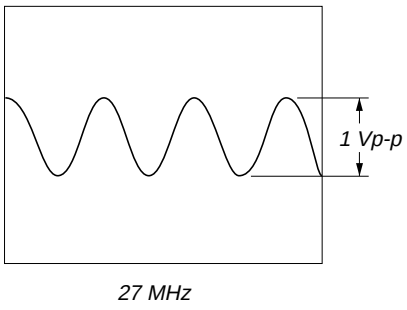
㉑ IC509 ⑳ (384FSO)



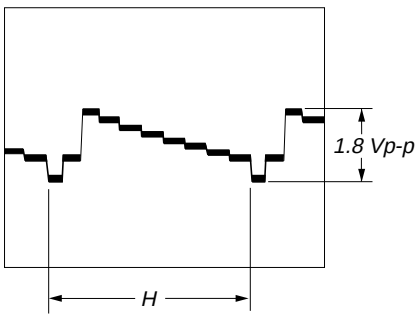
㉒ IC509 ㉑ (768FSO)



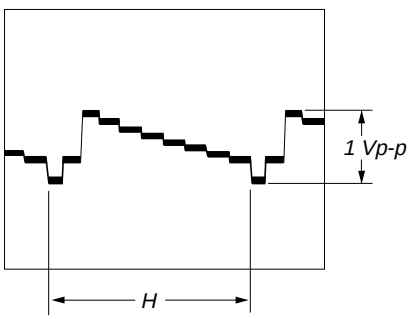
㉓ IC509 ㉔ (XT2)



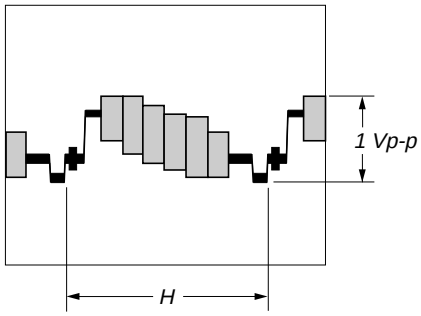
㉔ IC401 ⑦



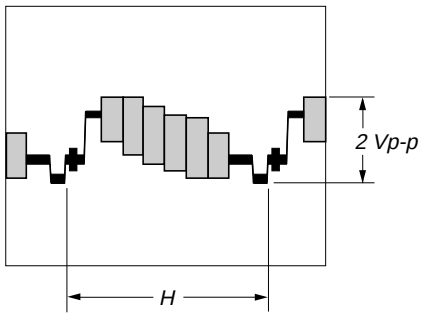
㉕ IC401 ⑤



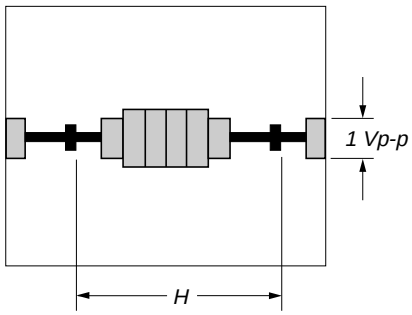
㉖ IC401 ③



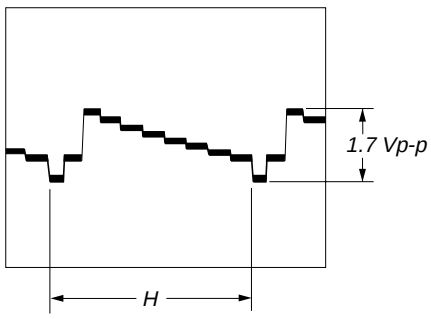
㉗ IC401 ①



㉘ J301 ③ (COUT)



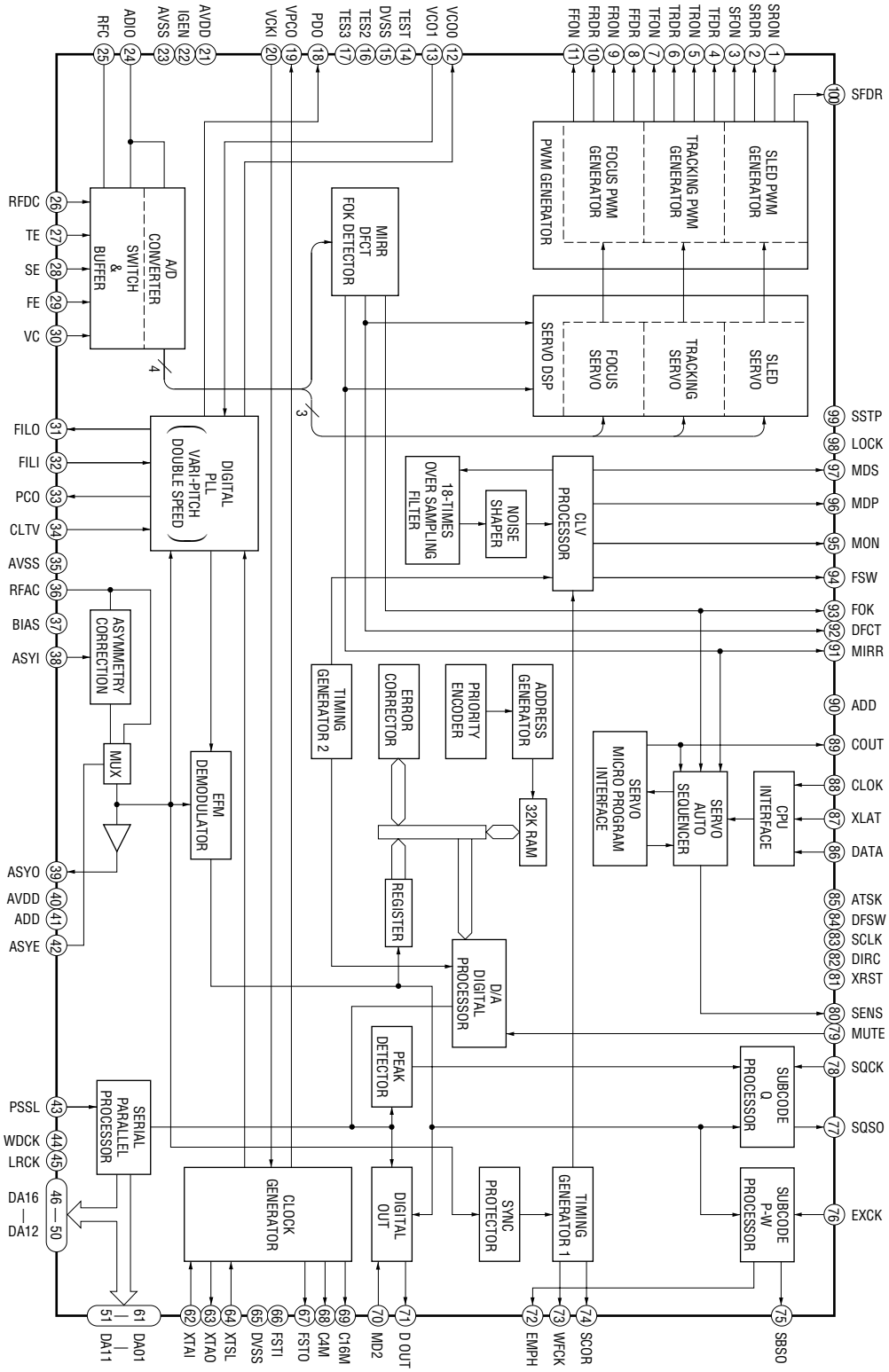
㉙ J301 ④ (YOUT)



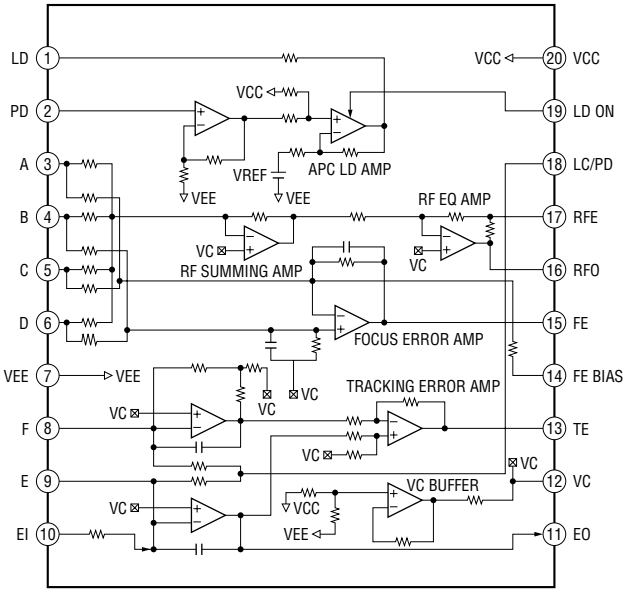
6-19. IC BLOCK DIAGRAMS

• BD BOARD

IC101 CXD2545Q

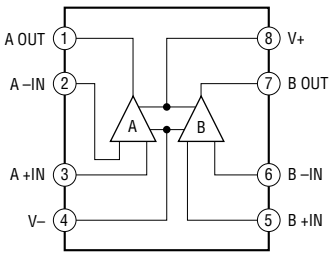


IC103 CXA1821M-T6



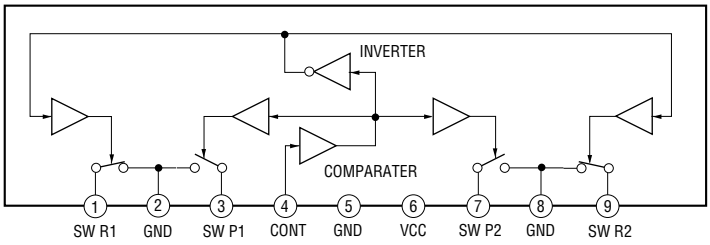
• VIDEO IN/OUT BOARD

IC601 NJM4580D-D



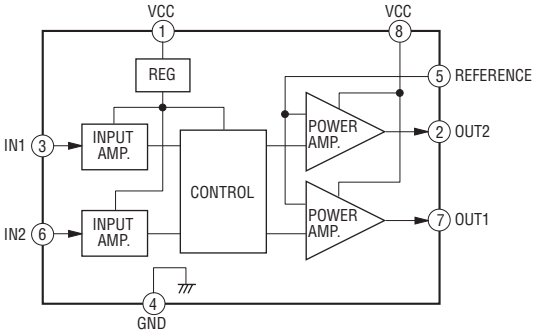
• AUDIO BOARD

IC602 µPC1330HA



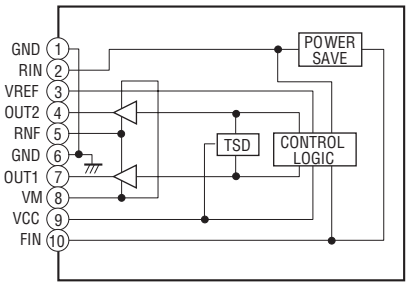
• MOTOR (TURN) BOARD

IC701 M54641L



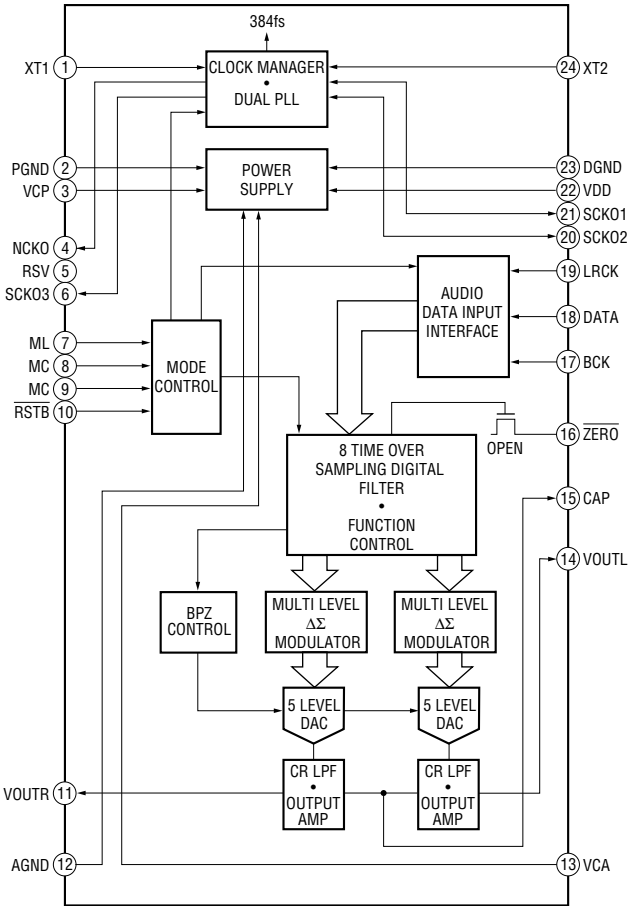
• MOTOR (SLIDE) BOARD

IC801 BA6286N



• VIDEO BOARD

IC509 PCM1727E-2/T2



6-20. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC101 MASTER CONTROL (uPD780016AYGF-022-3BA/EPM7064-RCONT2-V1.0)

Pin No.	Pin Name	I/O	Description
1	CAPM-EMG (+)	O	Capstan motor control 1 (+) signal output
2 to 7	LED1 to LED6	O	LED
8	NC	—	Not used
9	GND	—	Ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	—	Power supply (+5V)
13	NC	—	Not used
14	+5V	—	Power supply (+5V)
15	RESET	I	Reset signal input
16	GND	—	Ground
17	NC	—	Not used
18	SCOR	O	Subcode data request signal output
19	NC	—	Not used
20	NC	—	
21, 22	GND	—	Ground
23	VDD	—	Power supply (+5V)
24	AVDD	—	Power supply (+5V)
25	ADJ	I	CD adjust point port Normal "H"
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	KEY A	I	Key analog input
30	KEY B	I	
31	AMS	I	Connected to ground
32	CD/VCD	I	CD/VCD select input (Fixed at "L")
33	GND	—	Ground
34	SQ-DATA-IN	I	Subcode Q data clock input
35	CAN'T-USE	—	Not used
36	SQ-CLK	I	Sub code Q data clock input
37 to 45	GND	—	Ground
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLK	O	CD clock output
49	PBC	O	LED ON/OFF control output
50	VCD	O	
51	PBC-OFF	O	
52	DECO1	O	LED ON/OFF control output
53	EXIST2	O	LED ON/OFF control output
54	DISC2	O	LED ON/OFF control output
55	IIC/DATA	I	Serial data input
56	IIC/CLK	I	Serial clock input
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	NC	—	Not used

Pin No.	Pin Name	I/O	Description
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	NC	—	Not used
63	LOAD-OUT	O	Loading motor control signal output
64	LOAD-IN	O	
65	CD-PAUSE	O	LED ON/OFF control output
66	DECO2	O	
67	CD-PLAY	O	
68	EXIST3	O	
69	EXIST1	O	
70	DISC3	O	
71	GND	—	Ground
72	DISC1	O	LED ON/OFF control output
73	SENSE2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Slit sensor of disc table input
76	T-SENS	I	CD table detection signal input
77	NC	—	Not used
78	ENC 3	I	Disc tray address detect encoder input
79	ENC 2	I	
80	ENC 1	I	
81	OPEN	O	Loading out detection signal output
82	CAPM-H/L	O	Capstan motor speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	CAPM-EMG (–)	O	Capstan motor control 1 (–) signal output
86	CAPM-ON/OFF (–)	O	Capstan motor control 2 (–) signal output
87	TC-MUTE	O	TC mute ON/OFF selection output
88	REC/CB	O	REC/PB/PASS selection output
89	NR-ON/OFF	O	NR ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NC	—	Not used
92	BIAS	O	Bias ON/OFF signal output
93	NORM/HI	O	Equalizer select output
94	PB-A/B	O	PB Deck A/Deck B select output
95	A-PLAY	I	Deck A play detect
96	B-PLAY	I	Deck B play detect
97	TC-RELAY	O	REC/PB head selection output for IC602
98	A-HALF	I	Deck A cassette detect
99	ALC-ON/OFF	O	ALC ON/OFF output signal
100	CAPM-ON/OFF (+)	O	Capstan motor control 2 (+) signal output

• VIDEO BOARD IC502 M30620MC-313FP (CD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	SENSE	I	Internal status (SENSE) signal input from the CXD2545Q (IC101)
2	SENSE CLK	O	Sense serial data reading clock signal output to the CXD2545Q (IC101)
3	DSP DATA	O	Serial data output to the CXD2545Q (IC101)
4	DSP LATCH	O	Serial data latch pulse output to the CXD2545Q (IC101)
5	DSP CLK	O	Serial data transfer clock signal output to the CXD2545Q (IC101)
6	TSENS	I	Disc tray status detection signal input terminal Not used (open)
7	REMOTE IN	I	Remote control signal input terminal Not used (open)
8	BYTE	I	External data bus line byte selection signal input "L": 16 bit, "H": 8 bit (fixed at "L")
9	VSS	—	Ground terminal
10	DSP MUTE	O	Muting on/off control signal output to the CXD2545Q (IC101) "H": muting on
11	CTRL1	O	RF equalizer selection signal output terminal "L": double speed
12	$\overline{\text{XRESET}}$	I	Reset signal input from the system controller (IC501) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (10 MHz)
14	VSS	—	Ground terminal
15	XIN	I	Main system clock input terminal (10 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal (fixed at "H" in this set)
18	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2545Q (IC101)
19	ITOU	I	Former type: UART communication data input from the expansion (IC402) New type: Not used (open)
20	$\overline{\text{CL680 HINT}}$	I	Interrupt request signal input from the MPEG video/audio decoder (IC505)
21	CL680 SEL	O	Command selection signal output to the MPEG video/audio decoder (IC505)
22	DF LATCH	O	Serial data latch pulse output to the D/A converter (IC509) "L" active
23	CL680 HRDY	I	Ready status detection signal input from the MPEG video/audio decoder (IC505)
24	$\overline{\text{CL680 RESET}}$	O	Reset signal output to the MPEG video/audio decoder (IC505) "L": reset
25	JOG1	I	Rotary encoder jog dial pulse input terminal Not used (fixed at "H")
26	JOG2	I	Rotary encoder jog dial pulse input terminal Not used (fixed at "H")
27	CTRL2	O	RF equalizer selection signal output terminal "H": double speed
28	LDON	O	Laser on/off selection signal output to the CXA1821M (IC103) "H": laser on
29	RXD	I	Former type: Communication data receive input from the expansion (IC402)
	CLK	I/O	Newtype:Communication data reading clock signal input or transfer clock signal output with the system controller (IC501) and fluorescent indicator tube driver (IC601)
30	TXD	O	Former type: Communication data transmit output to the expansion (IC402)
	DATA	I/O	Newtype:Communication data bus with the systemcontroller (IC501) and fluorescent indicator tube driver (IC601)
31	DATA1O	O	Serial data output to the MPEG video/audio decoder (IC505) and D/A converter (IC509)
32	DATA1I	I	Serial data input from the MPEG video/audio decoder (IC505)
33	CLK1	O	Serial data transfer clock signal output to the MPEG video/audio decoder (IC505) and D/A converter (IC509)
34	SHARPNESS	O	Sharpness control signal output of the video signal (Y signal) "H" active ("L": normal)
35	XVLEVEL. DOWN	—	Not used (open)
36	SUBQ DATA	I	Sub-code Q data input from the CXD2545Q (IC101)
37	SUBQ CLK	O	Sub-code Q data reading clock signal output to the CXD2545Q (IC101)
38	P.ON	O	Power on/off control signal output terminal Not used (open)
39	BUS XRDY	I	Ready signal input terminal Not used (fixed at "H")

Pin No.	Pin Name	I/O	Description
40	BUS	—	Not used (open)
41	BUS XHOLD	I	Hold signal input terminal Not used (fixed at “H”)
42,43	BUS	—	Not used (open)
44	SHIMUKE	I	Destination setting terminal “L”: Chinese, “H”: English
45	BUS	I	Vertical synchronized signal input from the MPEG video/audio decoder (IC505) “L” active
46	BUS XWRL	—	Not used (open)
47	LO.BOOST	O	Low boost control signal output terminal Not used (open)
48	AUDIO MUTE	O	Audio muting on/off control signal output terminal “L”: muting on Not used (open)
49	LOAD OUT	O	Loading motor drive signal output terminal Not used (open)
50	LOAD IN	O	Loading motor drive signal output terminal Not used (open)
51	INSW	I	Disc detection (load in) switch input terminal Not used (fixed at “H”)
52	OUTSW	I	Disc detection (load out) switch input terminal Not used (fixed at “H”)
53	MODEL1	I	Destination setting terminal (fixed at “L”)
54	MODEL2	I	Destination setting terminal (fixed at “L”)
55	TBLL	O	Table motor drive signal output terminal Not used (open)
56	TBLR	O	Table motor drive signal output terminal Not used (open)
57 to 59	ENC1 to ENC3	I	Disc tray address detection signal input terminal Not used (open)
60,61	NCO	—	Not used (open)
62	VCC	—	Power supply terminal (+5V)
63	NCO	—	Not used (open)
64	VSS	—	Ground terminal
65	VMUTE	O	Video muting on/off control signal output terminal “L”: muting on
66 to 71	A6 to A1	O	Address signal output for the external device Not used (open)
72	UTOI	O	Former type: UART communication data output to the expansion (IC402) New type: Not used (open)
73	TEST LED	O	LED drive signal output for the self diagnosis indicator (D502) Normally: “L” (LED on)
74	TEST1	I	Setting terminal for the test mode 1 (for VCD check) Normally: fixed at “H” (“L”: test mode)
75	TEST2	I	Setting terminal for the test mode 2 (for SERVO check) Normally: fixed at “H” (“L”: test mode)
76	TEST3	I	Setting terminal for the test mode 3 Normally: fixed at “H” (“L”: test mode) Not used (fixed at “H”)
77	$\overline{\text{DEVICE RESET}}$	O	System reset signal output to the CXD2545Q (IC101), BA6392FP (IC102) and D/A converter (IC509) “L”: reset
78	STANDBY	O	Standby on/off control signal output terminal Not used (open)
79	FL CS	O	Chip select signal output terminal Not used (open)
80	FLBLK	O	Blank control signal output terminal Not used (open)
81 to 88	D7 to D0	I/O	Two-way data bus with the external device Not used (open)
89	MIC CTRL	O	Mic control signal output terminal Not used
90 to 92	KEY1 to KEY3	I	Key input terminal Not used
93	NT/PAL	I	Video system select switch (S501) input terminal “L”: PAL, “H”: NTSC, Center voltage: AUTO
94	MUSIC VOL	I	Volume input terminal Not used
95	KEY4	I	Key input terminal Not used
96	AVSS	—	Ground terminal (for A/D conversion)
97	MODE. SW	I	Mode switch input terminal Not used
98	VREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	AMP. ON	O	Power amplifier on/off selection signal output terminal Not used (open)

• VIDEO BOARD IC505 CL680T-D1 (MPEG VIDEO/AUDIO DECODER, VIDEO SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	NC	—	Not used (open)
2	VSS	—	Ground terminal
3	CD-BCK	I	CD decode bit clock signal (2.8224 MHz) input from the CXD2545Q (IC101)
4	CD-DATA	I	CD decode data input from the CXD2545Q (IC101)
5	CD-LRCK	I	CD decode L/R sampling clock signal (44.1 kHz) input from the CXD2545Q (IC101)
6	CD-C2PO	I	CD decode C2 error data input from the CXD2545Q (IC101)
7 to 9	NC	—	Not used (open)
10 to 15	MD0 to MD5	I/O	Two-way data bus with the program ROM (IC506) and D-RAM (IC507)
16	VSS	—	Ground terminal
17	MD6	I/O	Two-way data bus with the program ROM (IC506) and D-RAM (IC507)
18	VDD3	—	Power supply terminal (+3.3V)
19	MD7	I/O	Two-way data bus with the program ROM (IC506) and D-RAM (IC507)
20	VSS	—	Ground terminal
21	MD8	I/O	Two-way data bus with the program ROM (IC506) and D-RAM (IC507)
22	VDD3	—	Power supply terminal (+3.3V)
23 to 28	MD9 to MD14	I/O	Two-way data bus with the program ROM (IC506) and D-RAM (IC507)
29	MD15	I/O	Two-way data bus with the program ROM (IC506)
30 to 36	NC	—	Not used (open)
37	$\overline{\text{MCE}}$	O	Chip enable signal output to the program ROM (IC506)
38	$\overline{\text{MWE}}$	O	Write enable signal output to the D-RAM (IC507)
39	VSS	—	Ground terminal
40	$\overline{\text{CAS}}$	O	Column address strobe signal output to the D-RAM (IC507)
41	VDD3	—	Power supply terminal (+3.3V)
42	$\overline{\text{RAS0}}$	O	Row address strobe signal output to the D-RAM (IC507)
43	$\overline{\text{RAS1}}$	O	Row address strobe signal output terminal Not used (open)
44, 45	MA10, MA9	O	Address signal output to the program ROM (IC506)
46	MA8	O	Address signal output to the program ROM (IC506) and D-RAM (IC507)
47	VSS	—	Ground terminal
48	MA7	O	Address signal output to the program ROM (IC506) and D-RAM (IC507)
49	VDD3	—	Power supply terminal (+3.3V)
50 to 52	MA6 to MA4	O	Address signal output to the program ROM (IC506) and D-RAM (IC507)
53	VSS	—	Ground terminal
54	MA3	O	Address signal output to the program ROM (IC506) and D-RAM (IC507)
55	VDD3	—	Power supply terminal (+3.3V)
56 to 58	MA2 to MA0	O	Address signal output to the program ROM (IC506) and D-RAM (IC507)
59	PGIO7	—	Not used (open)
60	$\overline{\text{RESET}}$	I	Reset signal input from the CD mechanism controller (IC502) “L”: reset
61	VDDMAX-IN	I	Fix the maximum input voltage each input terminal and in/out terminal
62 to 64	NC	—	Not used (open)
65	AGND-DAC	—	Ground terminal (for D/A converter)
66	AVDD-DAC	—	Power supply terminal (+3.3V) (for D/A converter)
67	COMPOS OUT	O	Composite video signal output terminal Not used (open)
68	AGND-DAC	—	Ground terminal (for D/A converter)
69	Y-OUT	O	Luminance video signal output terminal
70	AVDD-DAC	—	Power supply terminal (+3.3V) (for D/A converter)
71	AGND-DAC	—	Ground terminal (for D/A converter)

Pin No.	Pin Name	I/O	Description
72	RREF	I	Fix the video signal output level control
73	VREF	O	Reference voltage (+1.235V) output terminal
74	AVDD-DAC	—	Power supply terminal (+3.3V) (for D/A converter)
75	C-OUT	O	Chrominance video signal output terminal
76	AGND-DAC	—	Ground terminal (for D/A converter)
77	CLK-SEL0	I	GCK (pin⑮) selection terminal "L": external clock, "H": internal clock (fixed at "H")
78	CLK-SEL1	I	DA-XCLK (pin⑯) selection (1) terminal Fixed at "H" in this set
79	CLK-SEL2	I	DA-XCLK (pin⑯) selection (2) terminal Fixed at "H" in this set
80	VSS	—	Ground terminal
81	RESERVED	I	Selection the operation clock 42.336 MHz (fixed at "L")
82	VDD3	—	Power supply terminal (+3.3V)
83	DA-EMP	—	Not used (open)
84	RESERVED	—	Not used (open)
85	AGND-PLL	—	Ground terminal (for PLL system)
86	DA-XCLK	I	Main reference clock signal (16.9344 MHz=384fs) from the D/A converter (IC509)
87	AVDD-PLL	—	Power supply terminal (+3.3V) (for PLL system)
88	PGIO4	—	Not used (open)
89	PGIO5	—	
90	PGIO6	—	
91	PGIO0	—	
92	PGIO8	—	
93	PGIO2/$\overline{\text{VSYNC}}$/ CSYNC	O	Vertical synchronized signal output to the CD mechanism controller (IC502)
94	AVDD-PLL	—	Power supply terminal (+3.3V) (for PLL system)
95 to 97	NC	—	Not used (open)
98	AGND-PLL	—	Ground terminal (for PLL system)
99	VSS	—	Ground terminal
100	NC	—	Not used (open)
101	PGIO3/$\overline{\text{HSYNC}}$	—	Not used (open)
102	VDD3	—	Power supply terminal (+3.3V)
103	PGIO1/VCK-OUT	—	Not used (open)
104	VSS	—	Ground terminal
105	GCKI	—	Not used (open)
106	VCK-IN	I	Main clock for video signal processor input from the D/A converter (IC509)
107	GCKOUT/DA-EMP	—	Not used (open)
108	DA-LRCK	O	Digital audio L/R sampling clock signal (44.1 kHz) output to the D/A converter (IC509)
109	VDDMAX-OUT	O	Fix the maximum output voltage (+5V) certain output terminal
110	DA-DATA	O	Digital audio data output to the D/A converter (IC509)
111	DA-BCK	O	Digital audio bit clock signal (2.8224 MHz) output to the D/A converter (IC509)
112	HD-OUT	O	Serial data output to the CD mechanism controller (IC502)
113	HRDY	O	Ready signal output to the CD mechanism controller (IC502)
114	$\overline{\text{HINT}}$	O	Interrupt request signal output to the CD mechanism controller (IC502)
115	CDG-SCK	—	Not used (open)
116	VSS	—	Ground terminal
117	HCK	I	Serial data transfer clock signal input from the CD mechanism controller (IC502)
118	VDD3	—	Power supply terminal (+3.3V)
119	HD-IN	I	Serial data input from the CD mechanism controller (IC502)

Pin No.	Pin Name	I/O	Description
120	VDD3	—	Power supply terminal (+3.3V)
121	HSEL	I	Command selection signal input from the CD mechanism controller (IC502)
122	CDG-SDATA	—	Not used (fixed at “L”)
123	CDG-VFSY	—	Not used (fixed at “L”)
124	CDG-S0S1	—	Not used (fixed at “L”)
125 to 128	NC	—	Not used (open)

SECTION 7
EXPLODED VIEWS

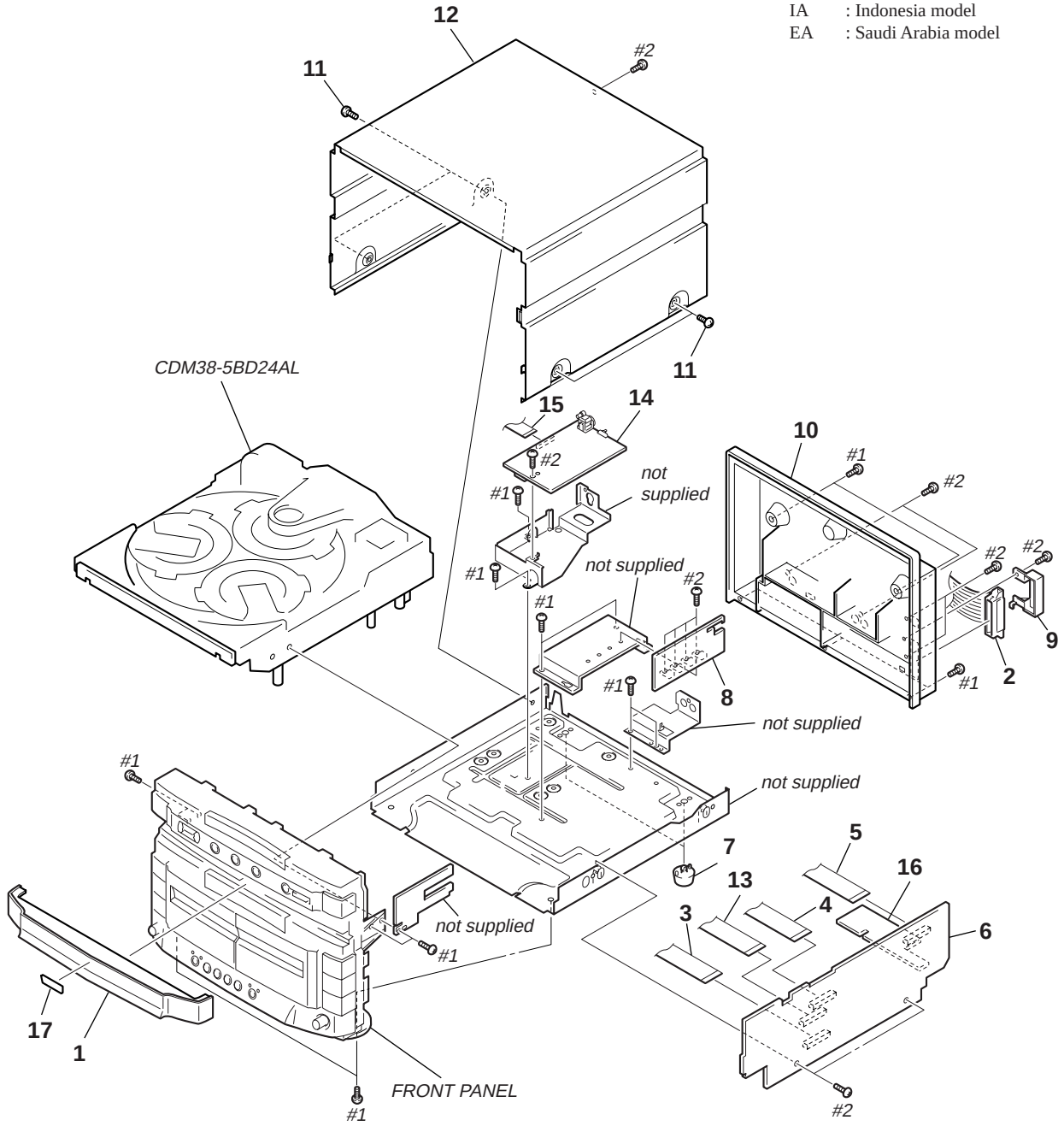
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  - HK : Hong Kong model
  - SP : Singapore model
  - MY : Malaysia model
  - TH : Thai model
  - IA : Indonesia model
  - EA : Saudi Arabia model

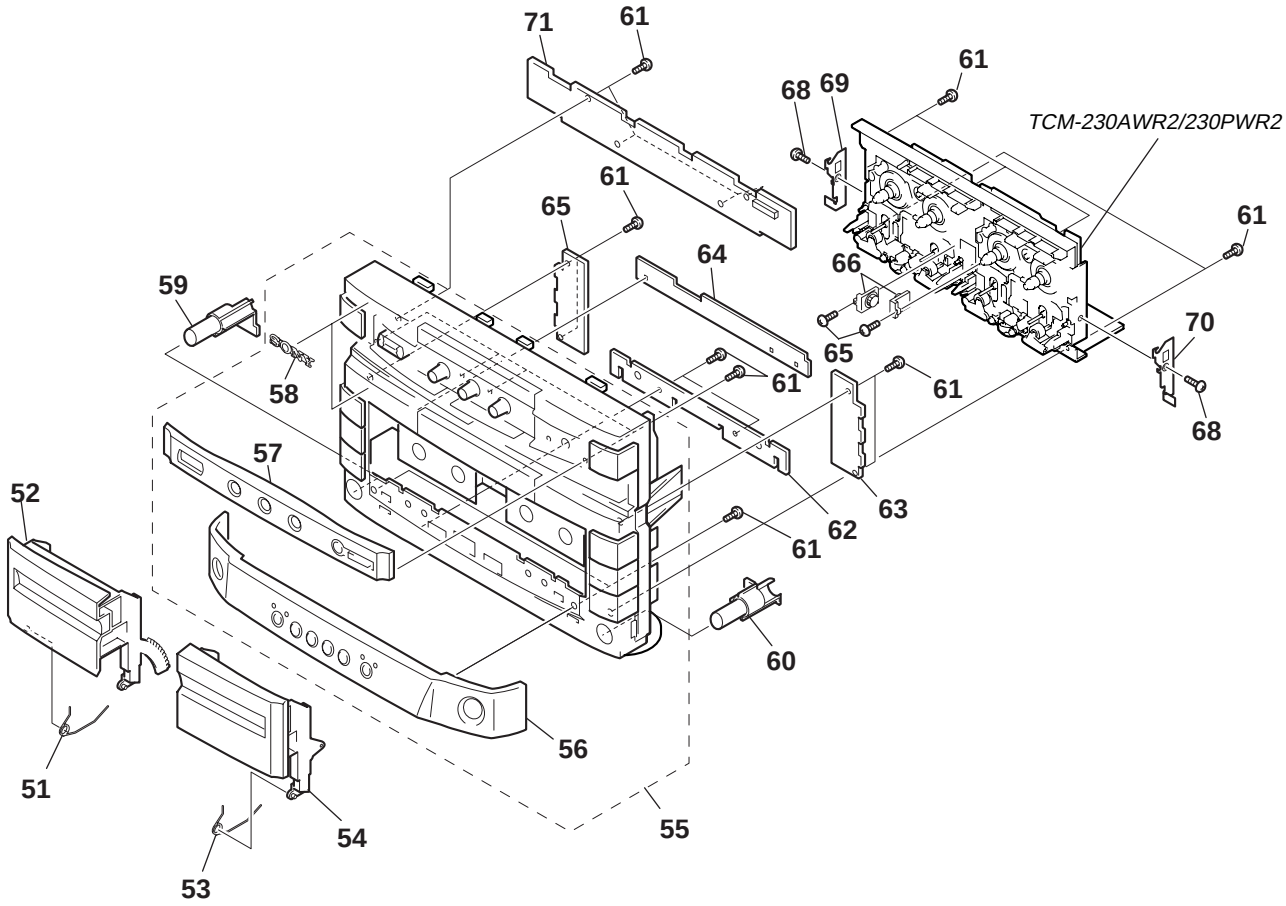
7-1. CASE AND BACK PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	X-4951-770-1	LOADING PANEL ASSY	
2	1-782-152-11	CORD(WITH CONNECTOR)	
3	1-773-012-11	WIRE(FLAT TYPE) (15 CORE)	
4	1-775-173-11	WIRE(FLAT TYPE) (17 CORE)	
5	1-783-864-11	WIRE(FLAT TYPE) (13 CORE)	
* 6	A-4414-710-A	MAINBOARD, COMPLETE (EA,HK,MY,SP)	
* 6	A-4414-749-A	MAINBOARD, COMPLETE (IA)	
* 6	A-4414-760-A	MAINBOARD, COMPLETE (TH)	
7	4-970-381-11	FOOT(REAR)	
* 8	1-669-418-11	REG BOARD	
9	4-995-189-01	COVER(SC)	

Ref. No.	Part No.	Description	Remarks
* 10	4-991-349-31	PANEL, BACK	
11	3-363-099-01	SCREW (CASE 3 TP2)	
* 12	4-900-858-21	CASE	
13	1-773-052-11	WIRE(FLAT TYPE) (17 CORE)	
* 14	A-4414-827-A	VIDEO BOARD, COMPLETE (IA)	
* 14	A-4414-828-A	VIDEO BOARD, COMPLETE (EA,HK,MY,SP)	
* 14	A-4414-829-A	VIDEO BOARD, COMPLETE (TH)	
15	1-775-215-11	WIRE(FLAT TYPE) (23 CORE)	
* 16	1-666-010-11	VIDEO IN/OUT BOARD	
17	4-991-781-01	EMBLEM (VCD)	

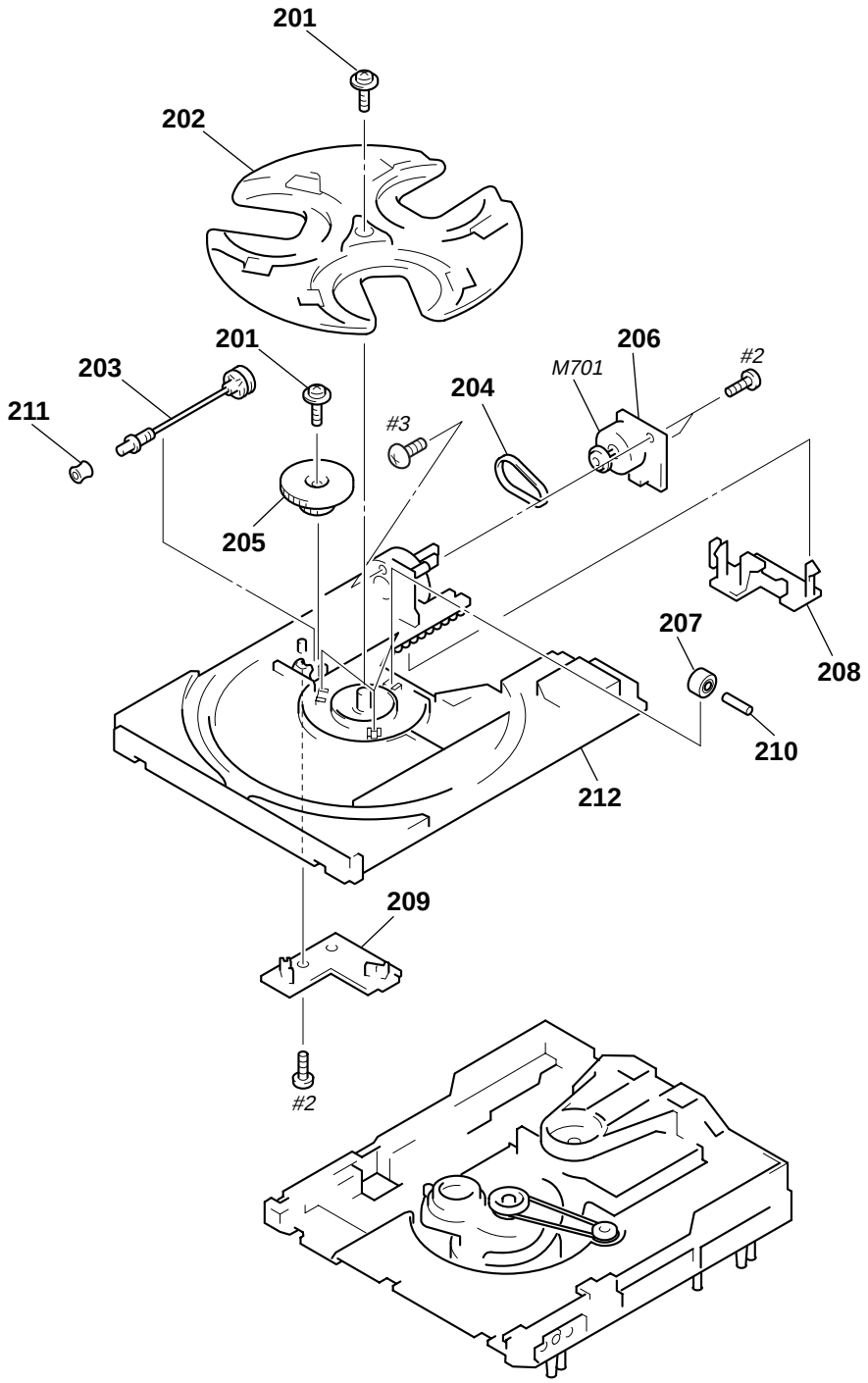
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-900-890-01	SPRING (L), TORSION	
52	X-4951-670-1	CASSETTE HOLDER (A) ASSY	
53	4-900-891-01	SPRING (R), TORSION	
54	X-4951-671-1	CASSETTE HOLDER (B) ASSY	
55	X-4951-771-1	FRONT PANEL ASSY	
56	X-4951-674-1	ESCUTHEON (TC) ASSY	
57	X-4951-772-1	ESCUTCHEON CD ASSY	
58	4-962-708-11	EMBLEM (4-A), SONY	
59	4-900-881-11	BUTTON (EJECT A)	
60	4-900-882-11	BUTTON (EJECT-B)	

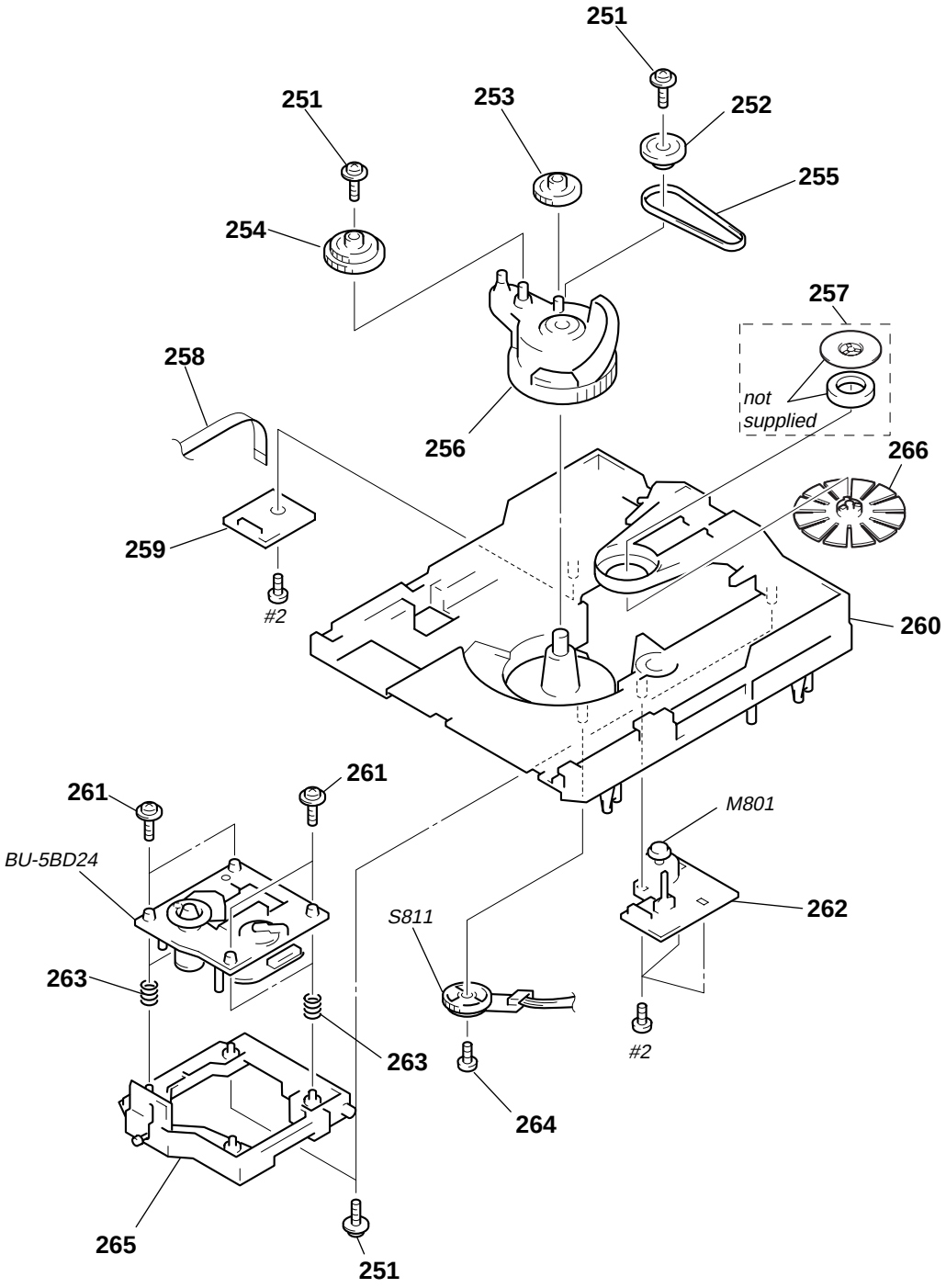
Ref. No.	Part No.	Description	Remarks
61	4-951-620-01	SCREW (2.6 × 8), +BVTP	
* 62	1-669-421-11	TCPANEL BOARD	
* 63	1-669-423-11	TC(B) BOARD	
* 64	1-669-419-11	TCLED BOARD	
* 65	1-669-422-11	TC(A) BOARD	
66	4-215-062-01	DAMPER	
68	3-019-456-11	SCREW, STEP	
69	4-900-888-01	EJECT (LEVER-L)	
70	4-900-889-01	EJECT (LEVER-R)	
* 71	1-669-420-11	CDPANEL BOARD	

7-3. CD MECHANISM SECTION 1 (CDM38-5BD24)



Ref. No.	Part No.	Description	Remarks
201	4-981-789-01	BRACKET (2), YOKE	
202	4-977-945-01	TRAY (TURN)	
203	X-4946-665-1	SHAFT ASSY, WORM	
204	4-977-943-01	BELT (TURN) (1.2)	
205	4-977-956-01	WHEEL, WORM	
* 206	1-658-577-11	MOTOR (TURN) BOARD	
207	4-988-162-01	ROLLER	
208	4-977-941-01	BEARING (WORM)	
* 209	1-658-576-11	SENSOR BOARD	
210	4-934-376-01	SHAFT (ROLLER)	
211	4-981-187-01	COLLAR (WORM)	
212	4-977-944-01	TRAY (SLIDE)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	

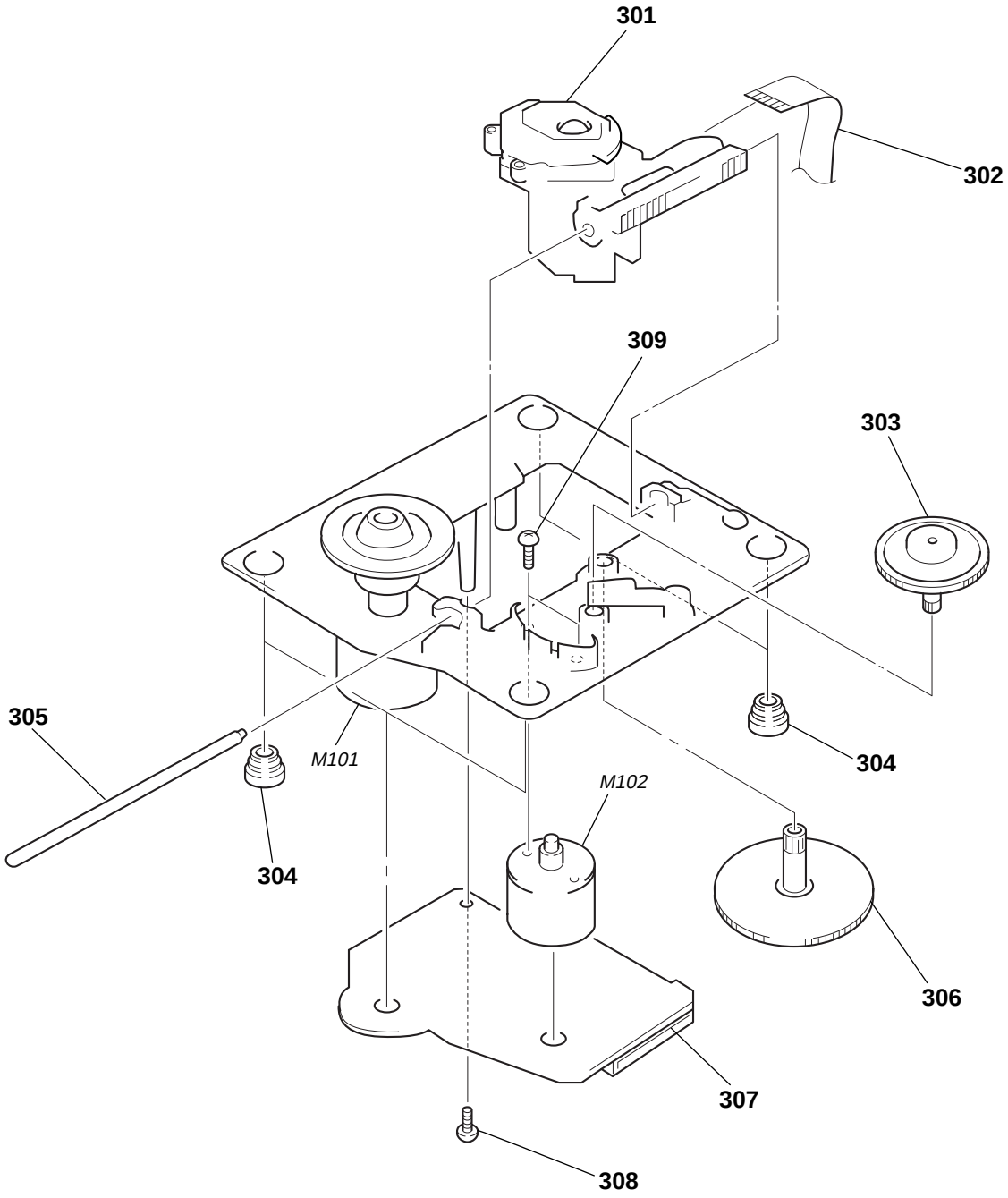
7-4. CD MECHANISM SECTION 2 (CDM38-5BD24)



Ref. No.	Part No.	Description	Remarks
251	4-981-789-11	BRACKET (2), YOKE	
252	4-977-954-01	PULLEY (SL)	
253	4-977-953-01	GEAR (SL-A)	
254	4-977-955-01	GEAR (SL-B)	
255	4-977-942-01	BELT (SL) (1.4)	
256	X-4946-667-1	CAM ASSY, BU	
257	1-452-925-21	MAGNET ASSY	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
* 259	1-658-575-11	CONNECTOR BOARD	

Ref. No.	Part No.	Description	Remarks
* 260	X-4946-668-1	CHASSIS (CDM) ASSY	
261	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
* 262	1-658-578-11	MOTOR (SLIDE) BOARD	
263	4-982-447-01	SPRING (BU), COMPRESSION	
264	4-951-620-41	SCREW (2.6), +BVTP	
* 265	X-4946-666-1	HOLDER (BU) ASSY	
266	4-993-142-21	PULLEY (L), PRESS	
M801	A-4672-004-A	MOTOR ASSY (SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU,TRAY ADDRESS DET)	

7-5. BASE UNIT SECTION (BU-5BD24)



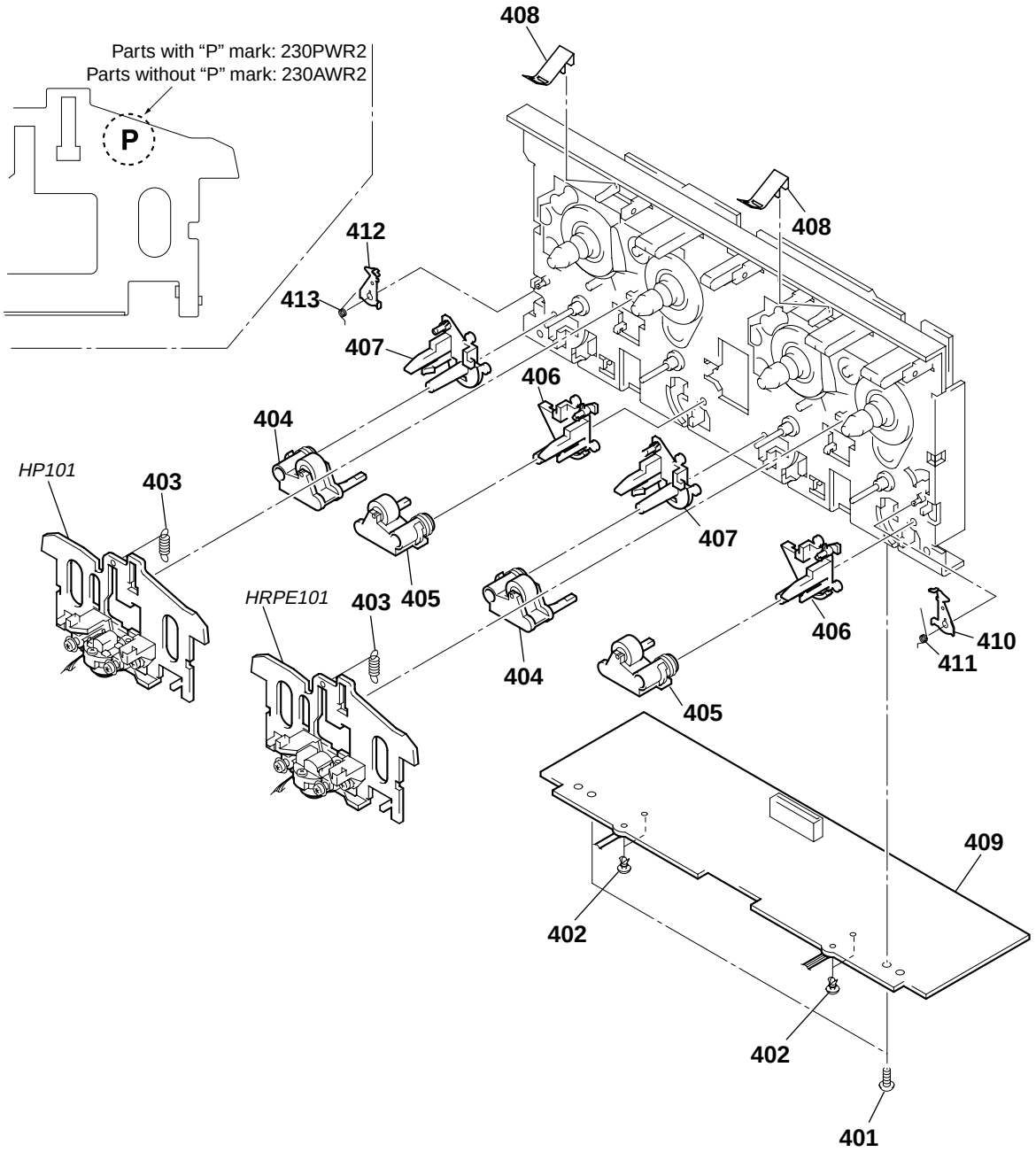
Ref. No.	Part No.	Description	Remarks
⚠301	8-848-379-31	OPTICAL PICK-UP BLOCK KSS-213BA/F-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
303	4-917-567-01	GEAR (M)	
304	4-951-940-01	INSULATOR (BU)	
305	4-917-565-01	SHAFT, SLED	
306	4-917-564-01	GEAR (P), FLATNESS	

Ref. No.	Part No.	Description	Remarks
* 307	A-4699-697-A	BD BOARD, COMPLETE	
308	4-951-620-41	SCREW (2.6), +BVTP	
309	3-713-786-51	SCREW +P 2 × 3	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-6. TC MECHANISM SECTION 1 (TCM-230AWR2/230PWR2)

***NOTE:** Two types of parts which are not interchangeable are available for the Head deck (A) ASSY and Head deck (B) ASSY. When replacing the parts, refer to the following figure, and use the appropriate part*

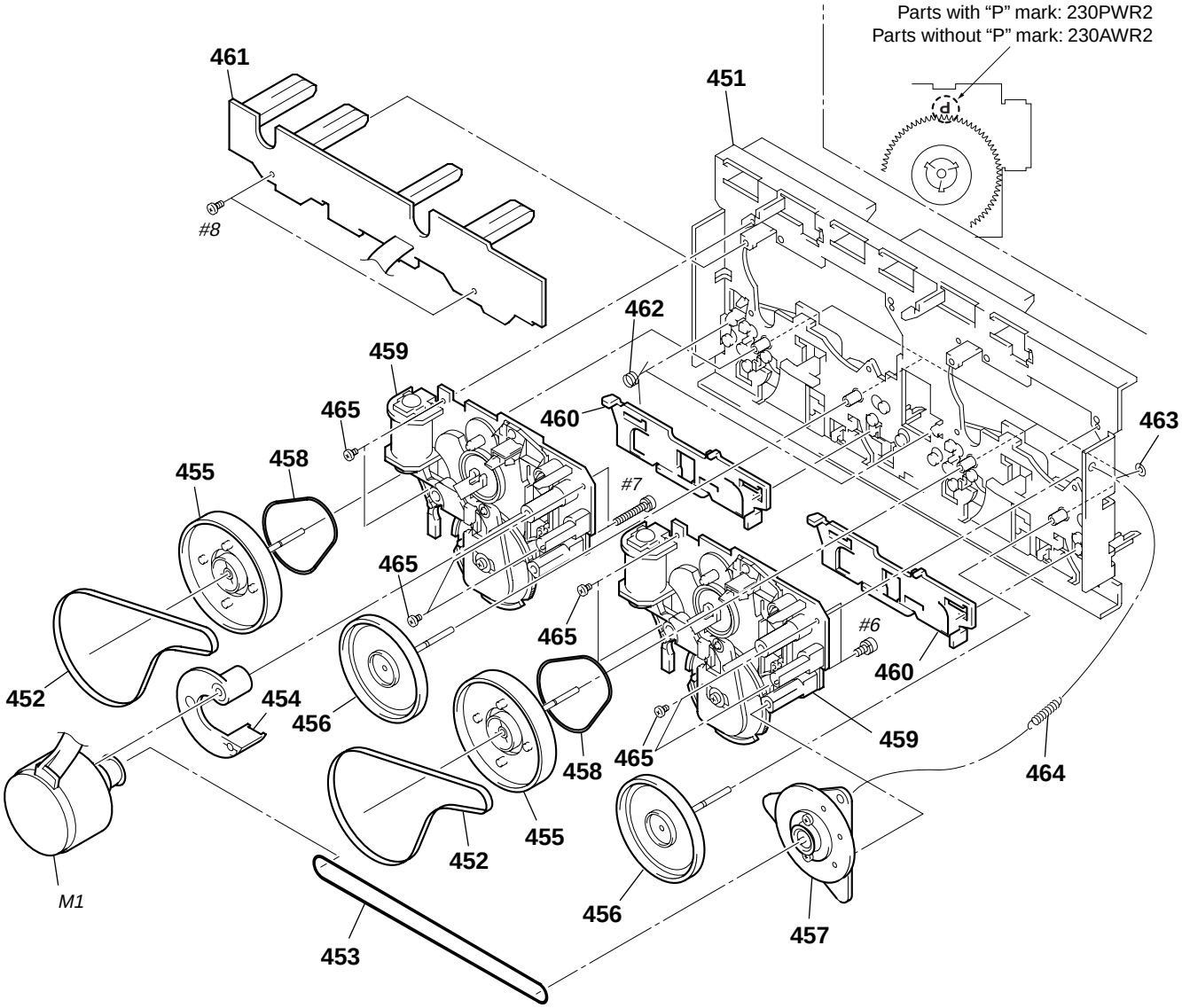


Ref. No.	Part No.	Description	Remarks
401	3-376-464-11	SCREW(+PTT 2.6 × 6),GROUND POINT	
402	3-911-116-21	RIVET, PUSH	
403	3-016-574-01	SPRING (HEAD),TENSION	
404	X-3374-156-1	PINCH LEVER (REV) ASSY	
405	X-3374-155-1	PINCH LEVER (FWD) ASSY	
406	3-016-564-01	BASE (PINCH LEVER FWD)	
407	3-016-565-01	BASE (PINCH LEVER REV)	
408	3-026-892-01	SPRING (CASSETTE), LEAF	
* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remarks
410	3-016-573-03	LEVER (EJECT PREVENTION R)	
411	3-032-810-02	SPRING (R), TORSION	
412	3-016-572-01	LEVER (EJECT PREVENTION L)	
413	3-032-809-02	SPRING (L), TORSION	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR2) (*NOTE)	
HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR2) (*NOTE)	
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD (230AWR2) (*NOTE)	
HRPE101	A-2056-684-A	DECK (B) ASSY, HEAD (230PWR2) (*NOTE)	

7-7. TC MECHANISM SECTION 2 (TCM-230AWR2/230PWR2)

***NOTE:** Two types of parts which are not interchangeable are available for the mechanical block assembly. When replacing the parts, refer to the following figure, and use the appropriate part.*



Ref. No.	Part No.	Description	Remarks
* 451	X-3374-214-3	CHASSIS ASSY, MAIN	
452	3-016-570-01	BELT (CAPSTAN)	
453	3-016-569-01	BELT (TENSION)	
454	3-017-360-01	BRACKET (MOTOR)	
455	X-3374-234-8	FLYWHEEL (FWD) ASSY	
456	X-3374-235-1	FLYWHEEL (REV) ASSY	
457	X-3374-238-1	PULLEY ASSY, TENSION	
458	3-024-405-01	BELT (FR2)	
459	A-2004-629-A	MECHANICAL BLOCK ASSY (230AWR2)	(*NOTE)
459	A-2004-630-A	MECHANICAL BLOCK ASSY (230PWR2)	(*NOTE)
460	3-016-566-01	SLIDER, REVERSE	
* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
462	3-016-575-01	SPRING, TORSION	
463	3-019-208-01	WASHER, STOPPER	
464	3-027-453-01	SPRING (GROUND), TENSION	
465	3-030-823-01	SCREW (+BVTT) (2 × 3.5)	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

AUDIO

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  HK : Hong Kong model
  SP : Singapore model
  MY : Malaysia model
  TH : Thai model
  IA : Indonesia model
  EA : Saudi Arabia model

Ref. No.	Part No.	Description			Remarks
*	A-2007-731-A	AUDIO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-126-968-11	ELECT	100uF	20%	6.3V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-107-715-11	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-126-233-11	ELECT	22uF	20%	50V
C331	1-137-427-11	FILM	120PF	5%	50V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-126-968-11	ELECT	100uF	20%	6.3V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-107-715-11	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-126-233-11	ELECT	22uF	20%	50V
C431	1-137-427-11	FILM	120PF	5%	50V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-104-396-11	ELECT	10uF	20%	16V
C602	1-104-396-11	ELECT	10uF	20%	16V
C611	1-104-396-11	ELECT	10uF	20%	16V
C612	1-104-396-11	ELECT	10uF	20%	16V
C621	1-137-150-11	FILM	0.01uF	5%	100V
C622	1-126-961-11	ELECT	2.2uF	20%	50V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-104-664-11	ELECT	47uF	20%	16V
		< CONNECTOR >			
CN601	1-568-834-21	SOCKET, CONNECTOR 15P			

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC601	8-759-111-44	IC uPC4570C-1			
IC602	8-759-143-54	IC uPC1330HA			
IC611	8-759-111-44	IC uPC4570C-1			
		< COIL >			
L331	1-410-780-11	INDUCTOR 27mH			
L431	1-410-780-11	INDUCTOR 27mH			
L601	1-414-193-41	INDUCTOR 220uH			
L602	1-414-193-41	INDUCTOR 220uH			
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR 2SC2001TP-LK			
Q622	8-729-142-46	TRANSISTOR 2SC2001TP-LK			
Q623	8-729-801-93	TRANSISTOR 2SD1387-34-TP			
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W F
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W F
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W F
R602	1-249-409-11	CARBON	220	5%	1/4W F
R608	1-249-409-11	CARBON	220	5%	1/4W F
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R612	1-249-409-11	CARBON	220	5%	1/4W F
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K (B DECK PB LEVEL L)			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K (A DECK PB LEVEL L)			
RV341	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS L)			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K (B DECK PB LEVEL R)			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K (A DECK PB LEVEL R)			
RV441	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS R)			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-4699-697-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C110	1-163-012-00	CERAMIC CHIP	0.0018uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT CHIP	100uF	20%	4V
C118	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C119	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C120	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C121	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C123	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C125	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C140	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C151	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C156	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C157	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C162	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN101	1-770-706-11	CONNECTOR, FFC/FPC 23P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	8-752-369-78	IC CXD2545Q			
* IC102	8-759-455-91	IC BA6392FP-E2			
IC103	8-752-072-45	IC CXA1821M-T6			
IC104	8-759-398-25	IC TC7SH04F(TE85L)			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-RT1			
Q102	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6			
Q103	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6			
		< RESISTOR >			
R101	1-216-077-91	RES,CHIP	15K	5%	1/10W
R102	1-216-097-91	RES,CHIP	100K	5%	1/10W
R103	1-216-077-91	RES,CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-91	RES,CHIP	100K	5%	1/10W
R106	1-216-049-91	RES,CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-91	RES,CHIP	1M	5%	1/10W
R110	1-216-025-91	RES,CHIP	100	5%	1/10W
R112	1-216-049-91	RES,CHIP	1K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	RES,CHIP	100K	5%	1/10W
R125	1-216-033-00	METAL CHIP	220	5%	1/10W
R126	1-216-033-00	METAL CHIP	220	5%	1/10W
R127	1-216-033-00	METAL CHIP	220	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R134	1-216-049-91	RES,CHIP	1K	5%	1/10W
R141	1-216-089-91	RES,CHIP	47K	5%	1/10W
R142	1-216-081-00	METAL CHIP	22K	5%	1/10W
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W
R147	1-216-041-00	METAL CHIP	470	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	RES,CHIP	12	5%	1/10W
R150	1-216-025-91	RES,CHIP	100	5%	1/10W
R151	1-216-025-91	RES,CHIP	100	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-073-00	METAL CHIP	10K	5%	1/10W
R154	1-216-025-91	RES,CHIP	100	5%	1/10W
R155	1-216-025-91	RES,CHIP	100	5%	1/10W
R156	1-216-025-91	RES,CHIP	100	5%	1/10W
R158	1-216-109-00	METAL CHIP	330K	5%	1/10W
R159	1-216-097-91	RES,CHIP	100K	5%	1/10W
R160	1-216-295-91	SHORT	0		
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R171	1-216-025-91	RES,CHIP	100	5%	1/10W
R172	1-216-025-91	RES,CHIP	100	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD CD PANEL CONNECTOR LEAF SW

Ref. No.	Part No.	Description			Remarks
R173	1-216-025-91	RES,CHIP	100	5%	1/10W
R175	1-216-025-91	RES,CHIP	100	5%	1/10W
R176	1-216-073-00	METAL CHIP	10K	5%	1/10W
R177	1-216-073-00	METAL CHIP	10K	5%	1/10W
R178	1-216-073-00	METAL CHIP	10K	5%	1/10W
R179	1-216-025-91	RES,CHIP	100	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					
*	1-669-420-11	CD PANEL BOARD			
		**********			
		< CONNECTOR >			
CNL102	1-568-860-21	SOCKET, CONNECTOR 17P			
		< DIODE >			
D221	8-719-071-41	DIODE SELS5923C-TP15 (PBC OFF)			
D222	8-719-071-41	DIODE SELS5923C-TP15 (VCD)			
D223	8-719-071-41	DIODE SELS5923C-TP15 (PBC)			
D224	8-719-071-42	DIODE SEL5723C-TP15 (O)			
D225	8-719-071-42	DIODE SEL5723C-TP15 (O)			
D226	8-719-046-80	DIODE SML19416W-TP4 (1)			
D227	8-719-046-80	DIODE SML19416W-TP4 (2)			
D228	8-719-046-80	DIODE SML19416W-TP4 (3)			
D229	8-719-071-42	DIODE SEL5723C-TP15 (PLAY)			
D230	8-719-071-41	DIODE SELS5923C-TP15 (PAUSE)			
		< TRANSISTOR >			
Q211	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q212	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q213	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q214	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q215	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q216	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q217	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q218	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q219	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q220	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q221	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q222	8-729-029-21	TRANSISTOR DTA114ESA-TP			
Q223	8-729-029-21	TRANSISTOR DTA114ESA-TP			
		< RESISTOR >			
R241	1-249-410-11	CARBON	270	5%	1/4W F
R242	1-249-410-11	CARBON	270	5%	1/4W F
R243	1-249-410-11	CARBON	270	5%	1/4W F
R244	1-249-406-11	CARBON	120	5%	1/4W F
R245	1-249-406-11	CARBON	120	5%	1/4W F
R246	1-249-406-11	CARBON	120	5%	1/4W F
R247	1-249-406-11	CARBON	120	5%	1/4W F
R248	1-249-406-11	CARBON	120	5%	1/4W F
R249	1-249-406-11	CARBON	120	5%	1/4W F
R250	1-249-406-11	CARBON	120	5%	1/4W F
R251	1-249-406-11	CARBON	120	5%	1/4W F
R252	1-249-406-11	CARBON	120	5%	1/4W F
R253	1-249-410-11	CARBON	270	5%	1/4W F
R261	1-249-401-11	CARBON	47	5%	1/4W F
R262	1-249-403-11	CARBON	68	5%	1/4W F
R263	1-247-807-31	CARBON	100	5%	1/4W
R264	1-249-407-11	CARBON	150	5%	1/4W F
R265	1-249-407-11	CARBON	150	5%	1/4W F
R266	1-249-409-11	CARBON	220	5%	1/4W F
R267	1-249-411-11	CARBON	330	5%	1/4W
R268	1-249-413-11	CARBON	470	5%	1/4W F
R269	1-249-415-11	CARBON	680	5%	1/4W F
R270	1-249-417-11	CARBON	1K	5%	1/4W F
		< SWITCH >			
S270	1-762-751-11	SWITCH, TACTILE (PLAY PAUSE)			
S271	1-762-751-11	SWITCH, TACTILE (STOP)			
S272	1-762-751-11	SWITCH, TACTILE (OPEN/CLOSE)			
S273	1-762-751-11	SWITCH, TACTILE (3)			
S274	1-762-751-11	SWITCH, TACTILE (2)			
S275	1-762-751-11	SWITCH, TACTILE (1)			
S276	1-762-751-11	SWITCH, TACTILE (DISC SKIP/EX-CHANGE)			
S277	1-762-751-11	SWITCH, TACTILE (PREV)			
S278	1-762-751-11	SWITCH, TACTILE (RETURN)			
S279	1-762-751-11	SWITCH, TACTILE (SELECT)			
S280	1-762-751-11	SWITCH, TACTILE (NEXT)			
**********					
*	1-658-575-11	CONNECTOR BOARD			
		**********			
		< CONNECTOR >			
* CN701	1-568-946-11	PIN, CONNECTOR 8P			
CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P			
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR BA1A4M-TP			
		< RESISTOR >			
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W F
**********					
*	A-2007-732-A	LEAF SW BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1001	1-107-716-11	ELECT	33uF	20%	10V
		< CONNECTOR >			
CN1001	1-568-860-21	SOCKET, CONNECTOR 17P			
		< DIODE >			
D1001	8-719-911-19	DIODE 1SS133T-72			
D1002	8-719-911-19	DIODE 1SS133T-72			

Ref. No.	Part No.	Description			Remarks
		< CABLE >			
* DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P			
		< IC >			
IC1001	8-749-014-38	PHOTO INTERRUPTER SG-264			
IC1002	8-749-014-38	PHOTO INTERRUPTER SG-264			
		< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR DTA144ESA-TP			
		< RESISTOR >			
R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W F
R1002	1-249-409-11	CARBON	220	5%	1/4W F
R1003	1-249-414-11	CARBON	560	5%	1/4W F
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-856-00	CARBON	11K	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W F
		< VARIABLE RESISTOR >			
RV1001	1-241-785-11	RES, ADJ, CARBON 10K (TAPE SPEED(HIGH))			
RV1002	1-241-785-11	RES, ADJ, CARBON 10K (TAPE SPEED(NORMAL))			
		< SWITCH >			
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1003	1-771-333-11	SWITCH, LEAF (A HALF)			
S1004	1-771-205-11	SWITCH, LEAF (A 120/70)			
S1005	1-771-205-11	SWITCH, LEAF (REC A)			
S1006	1-771-333-11	SWITCH, LEAF (B HALF)			
S1008	1-771-205-11	SWITCH, LEAF (B 120/70)			
S1009	1-771-205-11	SWITCH, LEAF (REC B)			
**********					
*	A-4414-710-A	MAIN BOARD, COMPLETE (EA,HK,MY,SP)			
		**********			
*	A-4414-749-A	MAIN BOARD, COMPLETE (IA)			
		**********			
*	A-4414-760-A	MAIN BOARD, COMPLETE (TH)			
		**********			
		< CAPACITOR >			
C001	1-164-159-11	CERAMIC	0.1uF		50V
C128	1-162-306-11	CERAMIC	0.01uF	30%	16V
C129	1-104-665-11	ELECT	100uF	20%	10V
C130	1-162-282-31	CERAMIC	100PF	10%	50V
C131	1-164-159-11	CERAMIC	0.1uF		50V
C132	1-164-159-11	CERAMIC	0.1uF		50V
C133	1-164-159-11	CERAMIC	0.1uF		50V
C134	1-164-159-11	CERAMIC	0.1uF		50V
C135	1-162-284-31	CERAMIC	150PF	10%	50V
C136	1-162-284-31	CERAMIC	150PF	10%	50V

Ref. No.	Part No.	Description			Remarks
C137	1-164-159-11	CERAMIC	0.1uF		50V
C138	1-104-665-11	ELECT	100uF	20%	10V
C139	1-128-551-11	ELECT	22uF	20%	25V
C140	1-164-159-11	CERAMIC	0.1uF		50V
C301	1-126-960-11	ELECT	1uF	20%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-126-964-11	ELECT	10uF	20%	50V
C306	1-126-960-11	ELECT	1uF	20%	50V
C307	1-126-959-11	ELECT	0.47uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-137-194-81	FILM	0.47uF	5%	50V
C310	1-162-290-31	CERAMIC	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-959-11	ELECT	0.47uF	20%	50V
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-104-665-11	ELECT	100uF	20%	10V
C317	1-104-665-11	ELECT	100uF	20%	10V
C331	1-164-159-11	CERAMIC	0.1uF		50V
C332	1-164-159-11	CERAMIC	0.1uF		50V
C333	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C334	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C335	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C336	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C351	1-126-960-11	ELECT	1uF	20%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C355	1-126-964-11	ELECT	10uF	20%	50V
C356	1-126-960-11	ELECT	1uF	20%	50V
C357	1-126-959-11	ELECT	0.47uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-137-194-81	FILM	0.47uF	5%	50V
C360	1-162-290-31	CERAMIC	470PF	10%	50V
C702	1-126-961-11	ELECT	2.2uF	20%	50V
C752	1-126-961-11	ELECT	2.2uF	20%	50V
C813	1-104-664-11	ELECT	47uF	20%	25V
C853	1-126-944-11	ELECT	3300uF	20%	25V
C854	1-126-954-11	ELECT	3300uF	20%	35V
C861	1-126-768-11	ELECT	2200uF	20%	16V
C862	1-104-665-11	ELECT	100uF	20%	10V
C863	1-126-929-11	ELECT	4700uF	20%	10V
C867	1-104-664-11	ELECT	47uF	20%	25V
C868	1-126-934-11	ELECT	220uF	20%	10V
C869	1-104-664-11	ELECT	47uF	20%	25V
C870	1-164-159-11	CERAMIC	0.1uF		50V
C871	1-164-159-11	CERAMIC	0.1uF		50V
C872	1-126-929-11	ELECT	4700uF	20%	10V
C873	1-104-665-11	ELECT	100uF	20%	10V
C876	1-104-656-11	ELECT	2200uF	20%	6.3V
		< CONNECTOR >			
* CN111	1-568-935-11	PIN, CONNECTOR 8P			
* CN112	1-568-936-11	PIN, CONNECTOR 9P			
* CN113	1-568-935-11	PIN, CONNECTOR 8P			

MAIN

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
* CNB108	1-764-017-31	HOUSING,CONNECTOR(PC BOARD)17P	
CNJ106	1-770-721-11	CONNECTOR, BOARD TO BOARD 4P	
CNP105	1-770-387-11	PIN, CONNECTOR (PC BOARD) 3P	
CNS101	1-569-321-11	SOCKET, CONNECTOR 15P	
CNS102	1-568-440-11	SOCKET, CONNECTOR 17P	
CNS103	1-568-443-11	SOCKET, CONNECTOR 13P	
CNS104	1-568-440-21	SOCKET, CONNECTOR 17P	
		< DIODE >	
D110	8-719-911-19	DIODE 1SS133T-72	
D855	8-719-110-08	DIODE MTZJ-T-72-8.2	
D858	8-719-110-08	DIODE MTZJ-T-72-8.2	
D901	8-719-024-99	DIODE 11ES2-NTA2B	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
		< TERMINAL >	
* EH01	1-537-738-21	TERMINAL, EARTH	
		< IC >	
* IC101	8-759-557-13	IC EPM7064-RCONT2-V1.0 (EA,HK,MY,SP)	
* IC101	8-759-573-86	IC UPD780016AYGF-022-3BA (TH,IA)	
IC103	8-759-165-82	IC PST600E-T	
IC107	8-749-921-12	IC GP1F32T	
IC301	8-759-495-26	IC HA12215F	
		< TRANSISTOR >	
Q102	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q103	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q104	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q106	8-729-900-80	TRANSISTOR BA1A4M-TP	
Q331	8-729-116-56	TRANSISTOR 2SB1068TP-L	
Q332	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q333	8-729-116-56	TRANSISTOR 2SB1068TP-L	
Q334	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q335	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q336	8-729-116-56	TRANSISTOR 2SB1068TP-L	
Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q338	8-729-029-21	TRANSISTOR DTA114ESA-TP	
Q339	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q340	8-729-116-56	TRANSISTOR 2SB1068TP-L	
Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q342	8-729-029-21	TRANSISTOR DTA114ESA-TP	
Q343	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q852	8-729-018-60	TRANSISTOR 2SD2012-LC	
Q855	8-729-018-59	TRANSISTOR 2SB1375(LB-SONY)	
		< RESISTOR >	
R130	1-247-807-31	CARBON 100 5% 1/4W	
R131	1-247-807-31	CARBON 100 5% 1/4W	
R132	1-247-807-31	CARBON 100 5% 1/4W	
R133	1-247-807-31	CARBON 100 5% 1/4W	
R134	1-247-807-31	CARBON 100 5% 1/4W	

Ref. No.	Part No.	Description			Remarks
R135	1-247-807-31	CARBON	100	5%	1/4W
R136	1-247-807-31	CARBON	100	5%	1/4W
R139	1-249-429-11	CARBON	10K	5%	1/4W
R140	1-249-429-11	CARBON	10K	5%	1/4W
R141	1-249-429-11	CARBON	10K	5%	1/4W
R142	1-249-429-11	CARBON	10K	5%	1/4W
R143	1-247-807-31	CARBON	100	5%	1/4W
R146	1-249-417-11	CARBON	1K	5%	1/4W F
R147	1-249-429-11	CARBON	10K	5%	1/4W
R148	1-249-429-11	CARBON	10K	5%	1/4W
R149	1-247-807-31	CARBON	100	5%	1/4W
R150	1-247-807-31	CARBON	100	5%	1/4W
R151	1-247-807-31	CARBON	100	5%	1/4W
R152	1-249-429-11	CARBON	10K	5%	1/4W
R153	1-249-419-11	CARBON	1.5K	5%	1/4W F
R154	1-249-419-11	CARBON	1.5K	5%	1/4W F
R155	1-249-427-11	CARBON	6.8K	5%	1/4W F
R156	1-249-427-11	CARBON	6.8K	5%	1/4W F
R157	1-249-429-11	CARBON	10K	5%	1/4W
R161	1-247-807-31	CARBON	100	5%	1/4W
R162	1-247-807-31	CARBON	100	5%	1/4W
R166	1-249-429-11	CARBON	10K	5%	1/4W
R168	1-247-807-31	CARBON	100	5%	1/4W
R301	1-249-435-11	CARBON	33K	5%	1/4W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W F
R303	1-247-807-31	CARBON	100	5%	1/4W
R304	1-247-807-31	CARBON	100	5%	1/4W
R305	1-249-421-11	CARBON	2.2K	5%	1/4W F
R306	1-249-428-11	CARBON	8.2K	5%	1/4W F
R307	1-249-428-11	CARBON	8.2K	5%	1/4W F
R308	1-249-425-11	CARBON	4.7K	5%	1/4W F
R309	1-249-433-11	CARBON	22K	5%	1/4W
R311	1-247-903-00	CARBON	1M	5%	1/4W
R312	1-247-884-11	CARBON	160K	5%	1/4W
R313	1-249-441-11	CARBON	100K	5%	1/4W
R315	1-249-429-11	CARBON	10K	5%	1/4W
R316	1-249-432-11	CARBON	18K	5%	1/4W
R317	1-249-429-11	CARBON	10K	5%	1/4W
R318	1-249-429-11	CARBON	10K	5%	1/4W
R319	1-247-893-11	CARBON	390K	5%	1/4W
R321	1-249-422-11	CARBON	2.7K	5%	1/4W F
R322	1-249-428-11	CARBON	8.2K	5%	1/4W F
R324	1-247-876-11	CARBON	75K	5%	1/4W
R325	1-247-876-11	CARBON	75K	5%	1/4W
R326	1-249-417-11	CARBON	1K	5%	1/4W F
R327	1-249-437-11	CARBON	47K	5%	1/4W
R328	1-249-425-11	CARBON	4.7K	5%	1/4W F
R329	1-249-437-11	CARBON	47K	5%	1/4W
R330	1-249-425-11	CARBON	4.7K	5%	1/4W F
R331	1-249-437-11	CARBON	47K	5%	1/4W
R332	1-249-415-11	CARBON	680	5%	1/4W F
R333	1-249-421-11	CARBON	2.2K	5%	1/4W F
R334	1-249-415-11	CARBON	680	5%	1/4W F
R335	1-249-421-11	CARBON	2.2K	5%	1/4W F
R336	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R337	1-249-417-11	CARBON	1K	5%	1/4W F
R338	1-249-411-11	CARBON	330	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W
R341	1-249-417-11	CARBON	1K	5%	1/4W F
R342	1-249-411-11	CARBON	330	5%	1/4W
R343	1-249-437-11	CARBON	47K	5%	1/4W
R351	1-249-435-11	CARBON	33K	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W F
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-249-421-11	CARBON	2.2K	5%	1/4W F
R356	1-249-428-11	CARBON	8.2K	5%	1/4W F
R357	1-249-428-11	CARBON	8.2K	5%	1/4W F
R358	1-249-425-11	CARBON	4.7K	5%	1/4W F
R359	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-417-11	CARBON	1K	5%	1/4W F
R705	1-249-438-11	CARBON	56K	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W F
R754	1-249-417-11	CARBON	1K	5%	1/4W F
R755	1-249-438-11	CARBON	56K	5%	1/4W
R756	1-249-417-11	CARBON	1K	5%	1/4W F
R855	1-249-417-11	CARBON	1K	5%	1/4W F
R859	1-249-417-11	CARBON	1K	5%	1/4W F
⚠R861	1-212-853-00	FUSIBLE	6.8	5%	1/4W F
⚠R862	1-212-853-00	FUSIBLE	6.8	5%	1/4W F
		< VARIABLE RESISTOR >			
RV301	1-238-600-11	RES, ADJ, CARBON 10K (REC LEVEL L)			
RV351	1-238-600-11	RES, ADJ, CARBON 10K (REC LEVEL R)			
		< VIBRATOR >			
X101	1-760-489-11	VIBRATOR, CERAMIC 5MHz			
**********					
*	1-658-578-11	MOTOR (SLIDE) BOARD			
		**********			
		< CAPACITOR >			
C801	1-162-306-11	CERAMIC	0.01uF	30%	16V
C804	1-162-306-11	CERAMIC	0.01uF	30%	16V
C805	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN801	1-568-947-11	PIN, CONNECTOR 9P			
		< DIODE >			
D801	8-719-921-48	DIODE MTZJ-T-72-5.6C			
D804	8-719-911-19	DIODE 1N4148M-TP			
D805	8-719-911-19	DIODE 1N4148M-TP			
		< IC >			
IC801	8-759-274-09	IC BA6286N			
		< RESISTOR >			
R801	1-249-401-11	CARBON	47	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
		< SWITCH >			
S801	1-762-527-11	SWITCH, ROTARY (OPEN/CLOSE)			
**********					
*	1-658-577-11	MOTOR (TURN) BOARD			
		**********			
		< CAPACITOR >			
C701	1-162-306-11	CERAMIC	0.01uF	30%	16V
C702	1-126-964-11	ELECT	10uF	20%	50V
C705	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P			
CN704	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B			
		< IC >			
IC701	8-759-633-65	IC M54641L			
		< RESISTOR >			
R706	1-249-411-11	CARBON	330	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W F
**********					
*	1-669-418-11	REG BOARD			
		**********			
	7-685-646-79	SCREW +BVTP	3 × 8	TYPE2 N-S	
		< CAPACITOR >			
C850	1-164-159-11	CERAMIC	0.1uF		50V
C851	1-164-159-11	CERAMIC	0.1uF		50V
C852	1-164-159-11	CERAMIC	0.1uF		50V
C855	1-164-159-11	CERAMIC	0.1uF		50V
C865	1-104-664-11	ELECT	47uF	20%	25V
C866	1-104-664-11	ELECT	47uF	20%	25V
		< DIODE >			
D851	8-719-911-19	DIODE 1SS133T-72			
D852	8-719-911-19	DIODE 1SS133T-72			
		< IC >			
IC851	8-759-231-58	IC M5F7812L			
IC852	8-759-231-53	IC M5F7805L			
IC853	8-759-604-86	IC M5F7807L			
IC854	8-759-231-53	IC M5F7805L			
**********					
*	1-658-576-11	SENSOR BOARD			
		**********			
		< IC >			
IC702	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC703	8-749-924-30	PHOTO REFLECTOR GP2S28			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remarks
		< RESISTOR >				
R701	1-249-416-11	CARBON	820	5%	1/4W	F
R702	1-249-407-11	CARBON	150	5%	1/4W	F
**********						
*	1-669-422-11	TC (A) BOARD				
		**********				
		< RESISTOR >				
R209	1-249-415-11	CARBON	680	5%	1/4W	F
R210	1-249-417-11	CARBON	1K	5%	1/4W	F
R211	1-249-419-11	CARBON	1.5K	5%	1/4W	F
		< SWITCH >				
S260	1-762-751-11	SWITCH, TACTILE (DECK A STOP)				
S261	1-762-751-11	SWITCH, TACTILE (DECK A REV)				
S262	1-762-751-11	SWITCH, TACTILE (DECK A PLAY)				
**********						
*	1-669-423-11	TC (B) BOARD				
		**********				
		< JACK >				
CNJ105	1-770-396-11	HOUSING, CONNECTOR(PC BOARD)3P				
		< RESISTOR >				
R201	1-249-401-11	CARBON	47	5%	1/4W	F
R202	1-249-403-11	CARBON	68	5%	1/4W	F
		< SWITCH >				
S251	1-762-751-11	SWITCH, TACTILE (DECK B PLAY)				
S252	1-762-751-11	SWITCH, TACTILE (DECK B REV)				
S253	1-762-751-11	SWITCH, TACTILE (DECK B STOP)				
**********						
*	1-669-419-11	TC LED BOARD				
		**********				
		< DIODE >				
D201	8-719-071-42	DIODE SEL5723C-TP15 (DECK B PLAY)				
D202	8-719-071-42	DIODE SEL5723C-TP15 (DECK B REV)				
D203	8-719-071-41	DIODE SELS5923C-TP15 (PAUSE)				
D204	8-719-071-44	DIODE SELS5223C-TP15 (REC)				
D205	8-719-071-42	DIODE SEL5723C-TP15 (DECK A PLAY)				
D206	8-719-071-42	DIODE SEL5723C-TP15 (DECK A REV)				
		< TRANSISTOR >				
Q201	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q202	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q203	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q204	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q205	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q206	8-729-029-21	TRANSISTOR	DTA114ESA-TP			

Ref. No.	Part No.	Description				Remarks
		< RESISTOR >				
R221	1-249-406-11	CARBON	120	5%	1/4W	F
R222	1-249-406-11	CARBON	120	5%	1/4W	F
R223	1-249-407-11	CARBON	150	5%	1/4W	F
R224	1-249-407-11	CARBON	150	5%	1/4W	F
R225	1-249-406-11	CARBON	120	5%	1/4W	F
R226	1-249-406-11	CARBON	120	5%	1/4W	F
**********						
*	1-669-421-11	TC PANEL BOARD				
		**********				
		< RESISTOR >				
R203	1-247-807-31	CARBON	100	5%	1/4W	
R204	1-249-407-11	CARBON	150	5%	1/4W	F
R205	1-249-407-11	CARBON	150	5%	1/4W	F
R206	1-249-409-11	CARBON	220	5%	1/4W	F
R207	1-249-411-11	CARBON	330	5%	1/4W	
R208	1-249-413-11	CARBON	470	5%	1/4W	F
		< SWITCH >				
S254	1-762-751-11	SWITCH, TACTILE (DIRECTION MODE)				
S255	1-762-751-11	SWITCH, TACTILE (PAUSE)				
S256	1-762-751-11	SWITCH, TACTILE (REC)				
S257	1-762-751-11	SWITCH, TACTILE (HI-SPEED DUBBING)				
S258	1-762-751-11	SWITCH, TACTILE (CD SYNCHRO)				
S259	1-762-751-11	SWITCH, TACTILE (DOLBY NR)				
**********						
*	A-4414-827-A	VIDEO BOARD, COMPLETE (IA)				
		**********				
*	A-4414-828-A	VIDEO BOARD, COMPLETE (EA,HK,MY,SP)				
		**********				
*	A-4414-829-A	VIDEO BOARD, COMPLETE (TH)				
		**********				
		< CAPACITOR >				
C101	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C102	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V	
C103	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C104	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	
C201	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C202	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V	
C203	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C301	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C302	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C303	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C304	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C305	1-163-263-11	CERAMIC CHIP	330PF	5%	50V	
C306	1-163-263-11	CERAMIC CHIP	330PF	5%	50V	
C310	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	
C311	1-216-295-91	SHORT	0			
C313	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C314	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C318	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C319	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C401	1-165-319-11	CERAMIC CHIP	0.1uF		50V	

Ref. No.	Part No.	Description			Remarks
C402	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C403	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C404	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C405	1-110-530-11	ELECT CHIP	1000uF	20%	6.3V
C406	1-110-530-11	ELECT CHIP	1000uF	20%	6.3V
C407	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C408	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C409	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C410	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C411	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C412	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C413	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C452	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C501	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C502	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C503	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C504	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C505	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C506	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C507	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C509	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C510	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C531	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C532	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C535	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C536	1-126-193-11	ELECT	1uF	20%	50V
C537	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C539	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C540	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C541	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C542	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C543	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C544	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C545	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C546	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C547	1-126-193-11	ELECT	1uF	20%	50V
C548	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C549	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C550	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C551	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C552	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C553	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C555	1-124-779-00	ELECT CHIP	10uF	20%	16V
C556	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C559	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C560	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C561	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C562	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C563	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C564	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C565	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C566	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C568	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C569	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C570	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C573	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C574	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C576	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C577	1-163-235-11	CERAMIC CHIP	22PF	5%	50V

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
* CN301	1-564-506-11	PLUG, CONNECTOR 3P	
CN501	1-770-706-11	CONNECTOR, FFC/FPC 23P	
CN503	1-779-416-11	CONNECTOR,FFC(LIF(NON-ZIF))13P	
		< TRIMMER >	
CT503	1-141-539-11	CAP, ADJ 10PF (VIDEO FREQUENCY)	
		< DIODE >	
D301	8-719-054-23	DIODE RB706D-40-T146	
D501	8-719-422-12	DIODE UDZ-TE-17-3.9B	
D502	8-719-018-51	DIODE CL-170R-CD-T (SELF DIAGNOSIS)	
		< IC >	
IC101	8-759-701-39	IC NJM2100M(TE2)	
IC401	8-759-262-00	IC MC14576CFEL	
IC402	8-759-564-64	IC M38513M4-C50FP-TP	
IC501	8-759-269-92	IC SN74HCU04ANSR	
IC502	8-759-582-84	IC M30620MC-313FP	
IC504	8-759-269-92	IC SN74HCU04ANSR	
IC505	8-759-535-48	IC CL680T-D1	
IC506	8-759-573-23	IC LC372100PM-J48-TLA	
IC507	8-759-342-01	IC MB814260-70PJEQ	
IC509	8-759-535-62	IC PCM1727E-2/T2	
		< JACK >	
J301	1-537-943-11	TERMINAL, S (S VIDEO OUT)	
		< JUMPER RESISTOR >	
JW101	1-216-295-91	SHORT 0	
JW201	1-216-295-91	SHORT 0	
JW401	1-216-295-91	SHORT 0	
JW402	1-216-295-91	SHORT 0	
JW403	1-216-295-91	SHORT 0	
JW404	1-216-295-91	SHORT 0	
JW405	1-216-295-91	SHORT 0	
JW413	1-216-295-91	SHORT 0	
JW502	1-216-295-91	SHORT 0	
JW503	1-216-295-91	SHORT 0	
JW504	1-216-295-91	SHORT 0	
JW505	1-216-295-91	SHORT 0	
		< COIL >	
L301	1-410-372-21	INDUCTOR CHIP 1.8uH	
L302	1-410-372-21	INDUCTOR CHIP 1.8uH	
L501	1-216-296-91	SHORT 0	
L502	1-216-296-91	SHORT 0	
L503	1-216-296-91	SHORT 0	
L504	1-410-375-11	INDUCTOR CHIP 3.3uH	
L505	1-216-296-91	SHORT 0	
L506	1-216-296-91	SHORT 0	
L507	1-216-296-91	SHORT 0	
L508	1-216-296-91	SHORT 0	
L509	1-216-296-91	SHORT 0	
L510	1-216-296-91	SHORT 0	

VIDEO

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q301	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q302	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q303	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q304	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q306	8-729-027-44	TRANSISTOR	DTC114TKA-T146		
Q307	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q308	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q310	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q453	8-729-920-72	TRANSISTOR	2SA1037K-T-146-QR		
Q454	8-729-920-72	TRANSISTOR	2SA1037K-T-146-QR		
Q502	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q531	8-729-140-75	TRANSISTOR	2SD999-T1-CLCK		
		< RESISTOR >			
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R103	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R105	1-216-295-91	SHORT	0		
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R203	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R205	1-216-295-91	SHORT	0		
R301	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R302	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R305	1-216-049-91	RES,CHIP	1K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-049-91	RES,CHIP	1K	5%	1/10W
R308	1-216-049-91	RES,CHIP	1K	5%	1/10W
R309	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W
R313	1-216-049-91	RES,CHIP	1K	5%	1/10W
R314	1-216-049-91	RES,CHIP	1K	5%	1/10W
R315	1-216-047-91	RES,CHIP	820	5%	1/10W
R316	1-216-657-11	METAL CHIP	1.8K	0.5%	1/10W
R317	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R318	1-216-033-00	METAL CHIP	220	5%	1/10W
R319	1-216-049-91	RES,CHIP	1K	5%	1/10W
R320	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R321	1-216-049-91	RES,CHIP	1K	5%	1/10W
R324	1-216-022-00	METAL CHIP	75	5%	1/10W
R325	1-216-295-91	SHORT	0		
R327	1-216-049-91	RES,CHIP	1K	5%	1/10W
R328	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R329	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R332	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R333	1-216-046-00	METAL CHIP	750	5%	1/10W
R335	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-073-00	METAL CHIP	10K	5%	1/10W
R340	1-216-022-00	METAL CHIP	75	5%	1/10W
R341	1-216-121-91	RES,CHIP	1M	5%	1/10W
R342	1-216-022-00	METAL CHIP	75	5%	1/10W
R403	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R404	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R405	1-216-065-91	RES,CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R406	1-216-081-00	METAL CHIP	22K	5%	1/10W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-049-91	RES,CHIP	1K	5%	1/10W
R410	1-216-049-91	RES,CHIP	1K	5%	1/10W
R411	1-216-073-00	METAL CHIP	10K	5%	1/10W
R412	1-216-073-00	METAL CHIP	10K	5%	1/10W
R413	1-216-025-91	RES,CHIP	100	5%	1/10W
R414	1-216-081-00	METAL CHIP	22K	5%	1/10W
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-073-00	METAL CHIP	10K	5%	1/10W
R425	1-216-073-00	METAL CHIP	10K	5%	1/10W
R426	1-216-073-00	METAL CHIP	10K	5%	1/10W
R457	1-216-025-91	RES,CHIP	100	5%	1/10W
R458	1-216-025-91	RES,CHIP	100	5%	1/10W
R459	1-216-025-91	RES,CHIP	100	5%	1/10W
R461	1-216-025-91	RES,CHIP	100	5%	1/10W
R462	1-216-025-91	RES,CHIP	100	5%	1/10W
R463	1-216-025-91	RES,CHIP	100	5%	1/10W
R464	1-216-025-91	RES,CHIP	100	5%	1/10W
R501	1-216-025-91	RES,CHIP	100	5%	1/10W
R502	1-216-025-91	RES,CHIP	100	5%	1/10W
R503	1-216-025-91	RES,CHIP	100	5%	1/10W
R504	1-216-025-91	RES,CHIP	100	5%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-025-91	RES,CHIP	100	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R508	1-216-081-00	METAL CHIP	22K	5%	1/10W
R509	1-216-081-00	METAL CHIP	22K	5%	1/10W
R510	1-216-081-00	METAL CHIP	22K	5%	1/10W
R511	1-216-081-00	METAL CHIP	22K	5%	1/10W
R512	1-216-081-00	METAL CHIP	22K	5%	1/10W
R513	1-216-081-00	METAL CHIP	22K	5%	1/10W
R514	1-216-081-00	METAL CHIP	22K	5%	1/10W
R516	1-216-073-00	METAL CHIP	10K	5%	1/10W
R517	1-216-073-00	METAL CHIP	10K	5%	1/10W
R518	1-216-073-00	METAL CHIP	10K	5%	1/10W
R519	1-216-025-91	RES,CHIP	100	5%	1/10W
R520	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R523	1-216-013-00	METAL CHIP	33	5%	1/10W
R530	1-216-081-00	METAL CHIP	22K	5%	1/10W
R531	1-216-025-91	RES,CHIP	100	5%	1/10W
R532	1-216-025-91	RES,CHIP	100	5%	1/10W
R533	1-216-025-91	RES,CHIP	100	5%	1/10W
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W
R535	1-216-073-00	METAL CHIP	10K	5%	1/10W
R536	1-216-033-00	METAL CHIP	220	5%	1/10W
R537	1-216-025-91	RES,CHIP	100	5%	1/10W
R538	1-216-073-00	METAL CHIP	10K	5%	1/10W
R542	1-216-049-91	RES,CHIP	1K	5%	1/10W
R543	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R544	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W

Ref. No.	Part No.	Description			Remarks
R545	1-216-025-91	RES,CHIP	100	5%	1/10W
R546	1-216-049-91	RES,CHIP	1K	5%	1/10W
R547	1-216-295-91	SHORT	0		
R548	1-216-049-91	RES,CHIP	1K	5%	1/10W
R549	1-216-025-91	RES,CHIP	100	5%	1/10W
R550	1-216-025-91	RES,CHIP	100	5%	1/10W
R551	1-216-025-91	RES,CHIP	100	5%	1/10W
R552	1-216-025-91	RES,CHIP	100	5%	1/10W
R554	1-216-025-91	RES,CHIP	100	5%	1/10W
R555	1-216-121-91	RES,CHIP	1M	5%	1/10W
R556	1-216-025-91	RES,CHIP	100	5%	1/10W
R557	1-216-025-91	RES,CHIP	100	5%	1/10W
R558	1-216-073-00	METAL CHIP	10K	5%	1/10W
R559	1-216-073-00	METAL CHIP	10K	5%	1/10W
R560	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R561	1-216-049-91	RES,CHIP	1K	5%	1/10W
R562	1-216-025-91	RES,CHIP	100	5%	1/10W
R563	1-216-025-91	RES,CHIP	100	5%	1/10W
R564	1-216-025-91	RES,CHIP	100	5%	1/10W
R565	1-216-025-91	RES,CHIP	100	5%	1/10W
R566	1-216-025-91	RES,CHIP	100	5%	1/10W
R567	1-216-073-00	METAL CHIP	10K	5%	1/10W
R568	1-216-073-00	METAL CHIP	10K	5%	1/10W
R569	1-216-073-00	METAL CHIP	10K	5%	1/10W
R571	1-128-065-11	ELECT CHIP	68MF	20%	10V
R572	1-216-073-00	METAL CHIP	10K	5%	1/10W
R573	1-216-073-00	METAL CHIP	10K	5%	1/10W
R574	1-216-073-00	METAL CHIP	10K	5%	1/10W
R577	1-216-081-00	METAL CHIP	22K	5%	1/10W
R578	1-216-081-00	METAL CHIP	22K	5%	1/10W
R579	1-216-073-00	METAL CHIP	10K	5%	1/10W
R580	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S501	1-571-395-11	SWITCH, SLIDE (SYSTEM SELECT)			
		< VIBRATOR >			
X401	1-767-261-21	VIBRATOR, CERAMIC 8MHz			
X501	1-767-510-11	VIBRATOR, CERAMIC 10MHz			
X503	1-767-519-11	VIBRATOR, CRYSTAL 27MHz			
**********					
*	1-666-010-11	VIDEO IN/OUT BOARD			
		**********			
		< CAPACITOR >			
C601	1-124-261-00	ELECT	10uF	20%	50V
C602	1-124-261-00	ELECT	10uF	20%	50V
C603	1-126-916-11	ELECT	1000uF	20%	6.3V
C604	1-124-261-00	ELECT	10uF	20%	50V
C605	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CNP106	1-770-725-11	CONNECTOR, BOARD TO BOARD 4P			
* CNP107	1-564-506-11	PLUG, CONNECTOR 3P			

Ref. No.	Part No.	Description			Remarks
		< FERRITE BEAD >			
FB603	1-412-473-21	INDUCTOR	0UH		
		< IC >			
IC601	8-759-711-14	IC NJM2246D			
		< JACK >			
J601	1-695-317-11	JACK, PIN 2P (VIDEO/MONITOR)			
		< TRANSISTOR >			
Q601	8-729-620-05	TRANSISTOR	2SC2603TP-EF		
		< RESISTOR >			
R601	1-249-403-11	CARBON	68	5%	1/4W F
R602	1-249-403-11	CARBON	68	5%	1/4W F
R603	1-249-408-11	CARBON	180	5%	1/4W F
R604	1-249-407-11	CARBON	150	5%	1/4W F
R605	1-249-404-00	CARBON	82	5%	1/4W F
**********					
		MISCELLANEOUS			
		**********			
2	1-782-152-11	CORD (WITH CONNECTOR)			
3	1-773-012-11	WIRE (FLAT TYPE) (15 CORE)			
4	1-775-173-11	WIRE (FLAT TYPE) (17 CORE)			
5	1-783-864-11	WIRE (FLAT TYPE) (13 CORE)			
13	1-773-052-11	WIRE (FLAT TYPE) (17 CORE)			
15	1-775-215-11	WIRE (FLAT TYPE) (23 CORE)			
257	1-452-925-21	MAGNET ASSY			
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)			
⚠301	8-848-379-31	OPTICAL PICK-UP BLOCK KSS-213BA/F-NP			
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)			
HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR2) (*NOTE)			
HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR2) (*NOTE)			
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD (230AWR2) (*NOTE)			
HRPE101	A-2056-684-A	DECK (B) ASSY, HEAD (230PWR2) (*NOTE)			
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN			
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
M701	A-4672-004-A	MOTOR ASSY (TURN)			
M801	A-4672-004-A	MOTOR ASSY (SLIDE)			
S811	1-473-335-11	ENCODER, ROTARY (BU,TRAY ADDRESS DET)			
**********					
		**********			
		HARDWARE LIST			
		**********			
#1	7-685-647-79	SCREW +BVTP 3 × 10 TYPE2 N-S			
#2	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 N-S			
#3	7-621-775-10	SCREW +B 2.6 × 4			
#4	7-621-255-15	SCREW +P 2 × 3			
#5	7-685-850-04	SCREW +BVTT 2 × 3 (S)			
#6	7-628-254-15	SCREW +PS 2.6 × 6			
#7	7-628-254-50	SCREW +PS 2.6 × 16			
#8	7-685-851-04	SCREW +BVTT 2 × 4 (S)			
#9	7-685-852-04	SCREW +BVTT 2 × 5 (S)			
#10	7-685-861-01	SCREW +BVTT 2.6 × 5 (S)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-929-006-11

Sony Corporation
Home Audio Company

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